

Appendix Q

Conclusions - Summary of Analysis Results

TABLE Q-1.
Summary of Unadjusted Results for Continuous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption		
		R ²	Slope	p-Value	R ²	Slope	p-Value
Percent Body Fat	6	0.019	0.627	0.001	0.044	0.792	<0.001
Sedimentation Rate ^a	6	0.006	0.053	0.092	0.016	0.078	<0.001
Average Sleep Each Night	9	0.001	-0.025	0.544	0.002	-0.033	0.250
MCMI: Basic Personality Patterns							
Schizoid Score ^a	9	0.025	0.077	<0.001	0.023	0.065	<0.001
Avoidant Score ^b	9	0.027	0.110	<0.001	0.020	0.082	<0.001
Dependent Score ^c	9	0.009	0.123	0.027	0.009	0.108	0.009
Histrionic Score ^d	9	0.018	-192.7	0.003	0.013	-150.8	0.002
Narcissistic Score	9	0.014	-1.454	0.007	0.012	-1.206	0.003
Antisocial Score	9	0.001	-0.557	0.417	<0.001	-0.236	0.643
Compulsive Score ^d	9	0.003	-58.779	0.193	0.002	-42.347	0.178
Passive-Aggressive Score ^c	9	0.008	0.130	0.046	0.015	0.156	<0.001
MCMI: Pathological Personality Disorders							
Schizotypal Score	9	0.034	2.836	<0.001	0.028	2.298	<0.001
Borderline Score	9	0.003	0.794	0.202	0.007	0.991	0.028
Paranoid Score	9	<0.001	0.227	0.675	<0.001	0.139	0.729
MCMI: Clinical Symptom Syndromes							
Anxiety Score	9	0.008	1.551	0.046	0.016	1.943	<0.001
Somatoform Score	9	0.002	0.617	0.327	0.006	0.981	0.033
Hypomania Score ^c	9	0.007	-0.189	0.054	0.003	-0.108	0.133
Dysthymia Score	9	0.003	1.052	0.184	0.006	1.293	0.031
Alcohol Abuse Score	9	<0.001	0.171	0.781	<0.001	0.244	0.588
Drug Abuse Score	9	<0.001	-0.501	0.495	<0.001	0.151	0.783
Psychotic Thinking Score	9	0.030	2.866	<0.001	0.022	2.147	<0.001
Psychotic Depression Score	9	0.016	2.122	0.005	0.016	1.842	<0.001
Psychotic Delusion Score	9	0.004	1.050	0.141	0.005	0.982	0.065
AST ^a	10	<0.001	0.0018	0.878	0.001	0.0087	0.304
ALT ^a	10	0.008	0.0372	0.039	0.017	0.0475	<0.001
GGT ^a	10	0.002	0.0230	0.357	0.017	0.0616	<0.001
Alkaline Phosphatase ^a	10	0.001	0.0072	0.380	0.010	0.0167	0.007
D-Glucaric Acid ^c	10	0.002	0.0585	0.377	0.005	0.0907	0.065
Total Bilirubin ^a	10	<0.001	-0.0009	0.934	<0.001	-0.0018	0.828
Direct Bilirubin ^e	10	<0.001	0.0105	0.522	0.004	0.0200	0.097
LDH ^a	10	<0.001	-0.0031	0.599	<0.001	0.0003	0.935
Cholesterol ^a	10	0.004	0.0088	0.175	0.002	0.0066	0.179
HDL ^a	10	0.004	-0.0126	0.169	0.021	-0.0266	<0.001

TABLE Q-1. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption		
		R ²	Slope	p-Value	R ²	Slope	p-Value
Cholesterol-HDL Ratio ^a	10	0.009	0.0214	0.031	0.027	0.0332	<0.001
Triglycerides ^a	10	0.006	0.0416	0.068	0.025	0.0733	<0.001
Creatine Kinase ^a	10	<0.001	-0.0036	0.830	<0.001	-0.0007	0.955
Systolic Blood Pressure	12	<0.001	0.232	0.732	0.002	0.592	0.220
Diastolic Blood Pressure	12	<0.001	0.172	0.640	0.003	0.359	0.176
Red Blood Cell Count	13	0.001	0.0105	0.442	0.005	0.0194	0.048
White Blood Cell Count ^c	13	0.006	0.0182	0.071	0.016	0.0260	<0.001
Hemoglobin	13	0.003	0.0473	0.232	0.004	0.0500	0.079
Hematocrit	13	0.002	0.1183	0.299	0.004	0.1485	0.070
Mean Corpuscular Volume	13	<0.001	0.0621	0.730	<0.001	-0.0424	0.737
Mean Corpuscular Hemoglobin	13	<0.001	0.0301	0.643	<0.001	-0.0193	0.674
Mean Corpuscular Hemoglobin Concentration	13	<0.001	0.0077	0.695	<0.001	-0.0062	0.670
Platelet Count	13	0.003	2.638	0.211	0.006	3.252	0.030
Prothrombin Time ^a	13	0.001	0.0013	0.417	<0.001	0.0009	0.444
Blood Urea Nitrogen ^c	14	0.006	-0.030	0.067	0.007	-0.028	0.022
Urine Specific Gravity	14	0.001	0.0002	0.419	0.002	0.0002	0.217
T ₃ % Uptake ^a	15	0.008	-0.0059	0.042	0.013	-0.0065	0.002
TSH ^f	15	<0.001	-0.0157	0.618	<0.001	-0.0136	0.560
FSH ^a	15	0.002	-0.0258	0.331	<0.001	-0.0145	0.463
Testosterone ^c	15	<0.001	-0.0527	0.679	0.003	-0.1436	0.126
Fasting Glucose ^a	15	0.010	0.0160	0.027	0.016	0.0168	<0.001
2-Hour Postprandial Glucose ^a	15	0.004	0.0146	0.177	0.008	0.0178	0.021
CD2 Cells ^a	16	<0.001	-0.007	0.747	<0.001	0.008	0.628
CD4 Cells ^a	16	<0.001	0.006	0.809	0.007	0.027	0.157
CD8 Cells ^a	16	<0.001	-0.002	0.934	0.001	-0.008	0.705
CD20 Cells ^a	16	0.389	0.074	0.102	0.341	0.036	0.212
CD14 Cells ^a	16	0.651	0.011	0.842	0.568	-0.017	0.633
CD25 Cells ^a	16	0.715	-0.096	0.339	0.665	0.006	0.933
HLA-DR Cells ^a	16	0.573	-0.007	0.848	0.540	0.001	0.960
CD4/CD8 Ratio ^a	16	0.635	0.040	0.230	0.578	0.042	0.074
TLC ^a	16	<0.001	-0.004	0.841	<0.001	0.006	0.679
Unstimulated PHA Response ^a	16	0.660	0.021	0.604	0.613	0.035	0.174
PHA Net Response (Concentration 1)	16	0.784	2,988	0.418	0.786	137	0.950
PHA Net Response (Concentration 2)	16	0.847	8,529	0.016	0.775	6,768	0.008
PHA Net Response (Concentration 3)	16	0.823	4,598	0.161	0.694	3,352	0.199

TABLE Q-1. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption		
		R ²	Slope	p-Value	R ²	Slope	p-Value
PHA Net Response (Across Day and Concentration)	16	0.839	5,372	0.078	0.785	3,419	0.105
Maximum PHA Net Response	16	0.861	10,112	0.005	0.804	6,606	0.009
Unstimulated MLC Response ^a	16	0.742	0.065	0.238	0.645	0.074	0.069
MLC Net Response	16	0.714	96	0.977	0.665	215	0.922
NKCA 50/1 Net Response	16	0.342	1.0	0.946	0.380	-4.8	0.629
NKCA 50/1 Percent Release	16	<0.001	0.228	0.813	0.001	-0.391	0.575
NKCI 50/1 Net Response	16	0.896	2.6	0.790	0.898	1.6	0.790
NKCI 50/1 Percent Release	16	0.693	0.1	0.894	0.705	0.1	0.758
IgA ^a	16	0.005	0.027	0.109	0.009	0.031	0.009
IgG ^a	16	<0.001	0.003	0.720	0.002	0.008	0.195
IgM ^a	16	0.001	0.014	0.425	<0.001	-0.009	0.471
FVC (% of predicted)	17	0.002	-0.412	0.361	0.016	-1.173	<0.001
FEV ₁ (% of predicted)	17	<0.001	0.216	0.681	0.002	-0.493	0.216
FEFmax (% of predicted)	17	0.001	-0.718	0.396	0.007	-1.454	0.021
Ratio of Observed FEV ₁ to Observed FVC ^g	17	0.020	-0.040	0.001	0.025	-0.040	<0.001

^aAnalysis performed on natural logarithm scale; slope based on natural logarithm of clinical parameter versus log₂ (initial dioxin).

^bAnalysis performed on natural logarithm (X + 1.0) scale; slope based on natural logarithm (avoidant score + 1.0) versus log₂ (initial dioxin).

^cAnalysis performed on square root scale; slope based on square root of clinical parameter versus log₂ (initial dioxin).

^dAnalysis performed on square scale; slope based on square of clinical parameter versus log₂ (initial dioxin).

^eAnalysis performed on natural logarithm (X + 0.1) scale; slope based on natural logarithm (direct bilirubin + 0.1) versus log₂ (initial dioxin).

^fAnalysis performed on natural logarithm (X - 0.4) scale; slope based on natural logarithm (TSH - 0.4) of clinical parameter versus log₂ (initial dioxin).

^gAnalysis performed on natural logarithm (1 - X) scale; slope based on natural logarithm (1 - ratio of observed FEV₁ to observed FVC) versus log₂ (initial dioxin).

Note: Statistics are based on the relationship between clinical parameter and log₂ (initial dioxin) unless otherwise specified.

TABLE Q-2.
Summary of Unadjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Slope	p-Value
Percent Body Fat	6	0.018	0.817	≤18.6 >18.6	0.549 0.644	0.086 0.014	0.045	0.438	≤18.6 >18.6	0.893 0.674	<0.001 <0.001
Sedimentation Rate ^b	6	0.014	0.500	≤18.6 >18.6	-0.007 0.037	0.892 0.368	0.018	0.311	≤18.6 >18.6	0.032 0.079	0.367 0.011
Average Sleep Each Night	9	0.007	0.758	≤18.6 >18.6	-0.031 -0.058	0.644 0.295	0.005	0.444	≤18.6 >18.6	-0.069 -0.024	0.118 0.544
<u>MCMI: Basic Personality Patterns</u>											
Schizoid Score ^b	9	0.033	0.070	≤18.6 >18.6	0.027 0.107	0.442 <0.001	0.029	0.054	≤18.6 >18.6	0.029 0.091	0.231 <0.001
Avoidant Score ^c	9	0.036	0.028	≤18.6 >18.6	0.023 0.158	0.624 <0.001	0.024	0.076	≤18.6 >18.6	0.033 0.112	0.317 <0.001
Dependent Score ^d	9	0.010	0.401	≤18.6 >18.6	0.060 0.159	0.506 0.033	0.010	0.541	≤18.6 >18.6	0.077 0.129	0.231 0.023
Histrionic Score ^e	9	0.022	0.099	≤18.6 >18.6	-52.0 -274.0	0.616 0.001	0.017	0.073	≤18.6 >18.6	-48.6 -226.9	0.513 <0.001
Narcissistic Score	9	0.021	0.217	≤18.6 >18.6	-0.352 -1.741	0.686 0.015	0.017	0.153	≤18.6 >18.6	-0.376 -1.569	0.548 0.005

TABLE Q-2. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Slope	p-Value
Antisocial Score	9	0.006	0.323	≤18.6 >18.6	0.526 -0.901	0.638 0.325	0.004	0.378	≤18.6 >18.6	0.450 -0.478	0.568 0.493
Compulsive Score ^e	9	0.005	0.576	≤18.6 >18.6	-35.019 -88.219	0.634 0.144	0.003	0.832	≤18.6 >18.6	-42.543 -56.414	0.384 0.192
Passive-Aggressive Score ^d	9	0.009	0.371	≤18.6 >18.6	0.059 0.182	0.578 0.037	0.016	0.768	≤18.6 >18.6	0.145 0.174	0.044 0.007
MCMI: Pathological Personality Disorders											
Schizotypal Score	9	0.036	0.264	≤18.6 >18.6	1.724 3.296	0.114 <0.001	0.031	0.290	≤18.6 >18.6	1.610 2.701	0.037 <0.001
Borderline Score	9	0.005	0.311	≤18.6 >18.6	-0.016 1.315	0.988 0.115	0.007	0.809	≤18.6 >18.6	0.891 1.118	0.204 0.072
Paranoid Score	9	0.010	0.979	≤18.6 >18.6	0.522 0.551	0.551 0.443	0.008	0.891	≤18.6 >18.6	0.476 0.362	0.443 0.509
MCMI: Clinical Symptom Syndromes											
Anxiety Score	9	0.010	0.155	≤18.6 >18.6	-0.023 2.307	0.986 0.026	0.016	0.917	≤18.6 >18.6	1.838 1.716	0.038 0.028
Somatoform Score	9	0.003	0.683	≤18.6 >18.6	0.374 0.915	0.716 0.277	0.008	0.394	≤18.6 >18.6	1.374 0.560	0.055 0.375

TABLE Q-2. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Slope	p-Value
Hypomania Score ^d	9	0.008	0.674	≤18.6 >18.6	-0.136 -0.222	0.394 0.089	0.005	0.237	≤18.6 >18.6	-0.017 -0.193	0.875 0.050
Dysthymia Score	9	0.005	0.576	≤18.6 >18.6	0.328 1.262	0.799 0.233	0.008	0.616	≤18.6 >18.6	0.886 1.507	0.340 0.067
Alcohol Abuse Score	9	0.002	0.325	≤18.6 >18.6	-0.668 0.609	0.506 0.459	0.002	0.384	≤18.6 >18.6	-0.230 0.583	0.742 0.347
Drug Abuse Score	9	0.012	0.247	≤18.6 >18.6	0.963 -0.823	0.419 0.399	0.009	0.204	≤18.6 >18.6	1.274 -0.169	0.134 0.822
Psychotic Thinking Score	9	0.038	0.059	≤18.6 >18.6	1.324 4.209	0.262 <0.001	0.028	0.083	≤18.6 >18.6	1.262 3.179	0.127 <0.001
Psychotic Depression Score	9	0.017	0.262	≤18.6 >18.6	0.988 2.755	0.417 0.006	0.019	0.195	≤18.6 >18.6	1.128 2.571	0.176 <0.001
Psychotic Delusion Score	9	0.009	0.218	≤18.6 >18.6	0.096 1.947	0.934 0.041	0.009	0.271	≤18.6 >18.6	0.487 1.698	0.554 0.020
AST ^b	10	0.012	0.599	≤18.6 >18.6	0.0038 -0.0090	0.840 0.559	0.009	0.758	≤18.6 >18.6	0.0018 0.0072	0.889 0.532
ALT ^b	10	0.011	0.464	≤18.6 >18.6	0.0525 0.0249	0.073 0.298	0.018	0.989	≤18.6 >18.6	0.0472 0.0468	0.022 0.010

TABLE Q-2. (Continued)

Summary of Unadjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Slope	p-Value
GGT ^b	10	0.004	0.715	≤18.6 >18.6	0.0289 0.0097	0.477 0.770	0.019	0.537	≤18.6 >18.6	0.0701 0.0476	0.011 0.048
Alkaline Phosphatase ^b	10	0.002	0.715	≤18.6 >18.6	0.0027 0.0090	0.838 0.408	0.009	0.704	≤18.6 >18.6	0.0177 0.0128	0.069 0.135
D-Glucaric Acid ^d	10	0.002	0.846	≤18.6 >18.6	0.0462 0.0735	0.673 0.402	0.004	0.993	≤18.6 >18.6	0.0900 0.0890	0.245 0.185
Total Bilirubin ^b	10	<0.001	0.607	≤18.6 >18.6	-0.0068 0.0052	0.707 0.724	0.002	0.346	≤18.6 >18.6	-0.0082 0.0076	0.516 0.491
Direct Bilirubin ^f	10	0.001	0.760	≤18.6 >18.6	0.0042 0.0148	0.876 0.500	0.004	0.915	≤18.6 >18.6	0.0183 0.0210	0.331 0.205
LDH ^b	10	0.008	0.252	≤18.6 >18.6	-0.0141 -0.0000	0.139 0.999	0.006	0.611	≤18.6 >18.6	-0.0047 -0.0003	0.473 0.963
Cholesterol ^b	10	0.010	0.069	≤18.6 >18.6	-0.0053 0.0195	0.612 0.024	0.003	0.335	≤18.6 >18.6	0.0007 0.0104	0.931 0.120
HDL ^b	10	0.004	0.920	≤18.6 >18.6	-0.0086 -0.0105	0.566 0.389	0.020	0.727	≤18.6 >18.6	-0.0276 -0.0227	0.008 0.014
Cholesterol-HDL Ratio ^b	10	0.012	0.200	≤18.6 >18.6	0.0032 0.0300	0.841 0.023	0.025	0.749	≤18.6 >18.6	0.0282 0.0331	0.015 0.001

TABLE Q-2. (Continued)

Summary of Unadjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption					
		R ²	C*T ^a	Time (Yrs.)	Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Slope	p-Value
Triglycerides ^b	10	0.006	0.476	≤18.6	0.0551	0.139	0.025	0.086	≤18.6	0.0993	<0.001
				>18.6	0.0208	0.493			>18.6	0.0389	0.094
Creatine Kinase ^b	10	0.003	0.507	≤18.6	-0.0134	0.629	<0.001	0.655	≤18.6	0.0079	0.682
				>18.6	0.0103	0.647			>18.6	-0.0036	0.834
Systolic Blood Pressure	12	0.002	0.961	≤18.6	0.017	0.987	0.003	0.781	≤18.6	0.263	0.719
				>18.6	0.087	0.924			>18.6	0.540	0.427
Diastolic Blood Pressure	12	0.004	0.884	≤18.6	0.188	0.747	0.004	0.680	≤18.6	0.180	0.655
				>18.6	0.077	0.877			>18.6	0.406	0.277
Red Blood Cell Count	13	0.006	0.710	≤18.6	0.0110	0.621	0.007	0.208	≤18.6	0.0343	0.025
				>18.6	0.0216	0.234			>18.6	0.0086	0.525
White Blood Cell Count ^b	13	0.008	0.479	≤18.6	0.0077	0.636	0.017	0.712	≤18.6	0.0219	0.059
				>18.6	0.0227	0.090			>18.6	0.0275	0.007
Hemoglobin	13	0.006	0.875	≤18.6	0.0692	0.283	0.010	0.036	≤18.6	0.1135	0.010
				>18.6	0.0561	0.287			>18.6	-0.0101	0.795
Hematocrit	13	0.003	0.904	≤18.6	0.1624	0.382	0.010	0.063	≤18.6	0.3016	0.018
				>18.6	0.1335	0.380			>18.6	-0.0140	0.901
Mean Corpuscular Volume	13	0.004	0.527	≤18.6	0.1380	0.638	0.005	0.564	≤18.6	-0.0098	0.960
				>18.6	-0.1019	0.671			>18.6	-0.1606	0.354

TABLE Q-2. (Continued)

Summary of Unadjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption					
		R ²	C*T ^a	Time (Yrs.)	Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Slope	p-Value
Mean Corpuscular Hemoglobin	13	0.002	0.497	≤18.6	0.0710	0.503	0.004	0.386	≤18.6	0.0134	0.851
				>18.6	-0.0220	0.800			>18.6	-0.0690	0.273
Mean Corpuscular Hemoglobin Concentration	13	0.009	0.915	≤18.6	0.0200	0.532	0.004	0.316	≤18.6	0.0158	0.487
				>18.6	0.0156	0.552			>18.6	-0.0146	0.467
Platelet Count	13	0.005	0.491	≤18.6	4.167	0.226	0.007	0.834	≤18.6	3.552	0.127
				>18.6	1.114	0.691			>18.6	2.904	0.158
Prothrombin Time ^b	13	0.006	0.701	≤18.6	0.0016	0.536	0.003	0.653	≤18.6	0.0002	0.895
				>18.6	0.0003	0.880			>18.6	0.0013	0.408
Blood Urea Nitrogen ^d	14	0.014	0.214	≤18.6	-0.048	0.070	0.009	0.538	≤18.6	-0.020	0.296
				>18.6	-0.006	0.800			>18.6	-0.035	0.035
Urine Specific Gravity	14	0.003	0.444	≤18.6	0.0004	0.250	0.003	0.437	≤18.6	0.0003	0.170
				>18.6	<0.0001	0.843			>18.6	<0.0001	0.703
T ₃ % Uptake ^b	15	0.017	0.060	≤18.6	0.0021	0.650	0.016	0.119	≤18.6	-0.0018	0.593
				>18.6	-0.0093	0.016			>18.6	-0.0087	0.003
TSH ^g	15	0.005	0.440	≤18.6	0.0066	0.900	0.002	0.834	≤18.6	-0.0138	0.707
				>18.6	-0.0449	0.279			>18.6	-0.0240	0.451
FSH ^b	15	0.016	0.068	≤18.6	-0.1058	0.014	0.011	0.014	≤18.6	-0.0819	0.007
				>18.6	-0.0043	0.902			>18.6	0.0184	0.495

TABLE Q-2. (Continued)

Summary of Unadjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption					
		R ²	C*T ^a	Time (Yrs.)	Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Slope	p-Value
Testosterone ^d	15	0.010	0.669	≤18.6	-0.0063	0.976	0.011	0.509	≤18.6	-0.1240	0.394
				>18.6	0.1077	0.524			>18.6	0.0042	0.974
Fasting Glucose ^b	15	0.015	0.096	≤18.6	-0.0001	0.993	0.018	0.242	≤18.6	0.0088	0.241
				>18.6	0.0251	0.009			>18.6	0.0205	0.002
2-Hour Postprandial Glucose ^b	15	0.014	0.555	≤18.6	0.0137	0.421	0.010	0.406	≤18.6	0.0073	0.530
				>18.6	0.0005	0.975			>18.6	0.0204	0.057
CD2 Cells ^a	16	0.007	0.739	≤18.6	-0.019	0.563	0.004	0.880	≤18.6	0.001	0.961
				>18.6	-0.005	0.870			>18.6	0.006	0.786
CD4 Cells ^a	16	0.008	0.510	≤18.6	-0.017	0.657	0.009	0.453	≤18.6	0.008	0.772
				>18.6	0.016	0.621			>18.6	0.038	0.161
CD8 Cells ^a	16	0.005	0.982	≤18.6	-0.009	0.840	0.013	0.472	≤18.6	-0.003	0.931
				>18.6	-0.010	0.788			>18.6	-0.035	0.257
CD20 Cells ^a	16	0.388	0.825	≤18.6	0.052	0.436	0.345	0.302	≤18.6	0.007	0.877
				>18.6	0.071	0.262			>18.6	0.069	0.099
CD14 Cells ^a	16	0.662	0.156	≤18.6	-0.045	0.559	0.573	0.300	≤18.6	-0.046	0.415
				>18.6	0.111	0.161			>18.6	0.039	0.488
CD25 Cells ^a	16	0.738	0.051	≤18.6	-0.351	0.028	0.670	0.314	≤18.6	-0.091	0.413
				>18.6	0.070	0.624			>18.6	0.070	0.524

OR-O

TABLE Q-2. (Continued)

Summary of Unadjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Slope	p-Value
HLA-DR Cells ^a	16	0.582	0.198	≤18.6 >18.6	-0.058 0.033	0.244 0.516	0.548	0.131	≤18.6 >18.6	-0.043 0.033	0.216 0.336
CD4/CD8 Ratio ^a	16	0.639	0.318	≤18.6 >18.6	0.075 0.005	0.142 0.917	0.581	0.657	≤18.6 >18.6	0.062 0.038	0.093 0.283
TLC ^a	16	0.013	0.264	≤18.6 >18.6	-0.033 0.013	0.283 0.636	0.006	0.367	≤18.6 >18.6	-0.011 0.016	0.604 0.446
Unstimulated PHA Response ^a	16	0.663	0.884	≤18.6 >18.6	0.038 0.026	0.514 0.656	0.615	0.878	≤18.6 >18.6	0.048 0.039	0.228 0.322
PHA Net Response	16	0.848	0.057	≤18.6 >18.6	12,371 613	0.006 0.887	0.791	0.891	≤18.6 >18.6	5,291 4,641	0.109 0.151
Maximum PHA Net Response	16	0.867	0.145	≤18.6 >18.6	16,692 6,241	0.002 0.217	0.812	0.662	≤18.6 >18.6	7,706 10,170	0.049 0.008
Unstimulated MLC Response ^a	16	0.743	0.881	≤18.6 >18.6	0.082 0.065	0.300 0.424	0.648	0.621	≤18.6 >18.6	0.066 0.109	0.283 0.075
MLC Net Response	16	0.717	0.537	≤18.6 >18.6	1,066 -3,186	0.826 0.524	0.665	0.826	≤18.6 >18.6	-778 286	0.816 0.932
NKCA 50/1 Net Response	16	0.355	0.480	≤18.6 >18.6	19.3 -1.9	0.380 0.932	0.385	0.277	≤18.6 >18.6	9.6 -13.1	0.521 0.368

Q-1

TABLE Q-2. (Continued)

Summary of Unadjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Slope	p-Value
NKCA 50/1 Percent Release	16	0.003	0.735	≤18.6 >18.6	0.718 0.047	0.632 0.971	0.002	0.745	≤18.6 >18.6	-0.062 -0.528	0.953 0.593
NKCI 50/1 Net Response	16	0.899	0.151	≤18.6 >18.6	19.4 -9.0	0.172 0.524	0.901	0.056	≤18.6 >18.6	15.8 -9.1	0.080 0.312
NKCI 50/1 Percent Release	16	0.703	0.176	≤18.6 >18.6	1.4 -0.7	0.206 0.531	0.714	0.063	≤18.6 >18.6	1.3 -0.7	0.077 0.355
IgA ^a	16	0.011	0.613	≤18.6 >18.6	0.026 0.008	0.339 0.725	0.012	0.594	≤18.6 >18.6	0.018 0.031	0.317 0.056
IgG ^a	16	<0.001	0.815	≤18.6 >18.6	0.007 0.003	0.612 0.810	0.004	0.938	≤18.6 >18.6	0.009 0.010	0.311 0.212
IgM ^a	16	0.003	0.725	≤18.6 >18.6	0.0006 0.013	0.983 0.567	0.004	0.174	≤18.6 >18.6	-0.033 0.004	0.099 0.844
FVC (% of predicted)	17	0.004	0.386	≤18.6 >18.6	-0.771 0.050	0.293 0.933	0.018	0.249	≤18.6 >18.6	-1.537 -0.732	0.003 0.114
FEV ₁ (% of predicted)	17	0.005	0.251	≤18.6 >18.6	-0.353 0.917	0.680 0.191	0.006	0.192	≤18.6 >18.6	-0.924 0.152	0.135 0.781

TABLE Q-2. (Continued)

Summary of Unadjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Slope	p-Value
Ratio of Observed FEV ₁ to Observed FVC ^b	17	0.024	0.779	≤18.6	-0.041	0.045	0.034	0.524	≤18.6	-0.039	0.005
				>18.6	-0.048	0.004			>18.6	-0.051	<0.001
FEFmax (% of predicted)	17	0.006	0.105	≤18.6	-2.370	0.085	0.009	0.160	≤18.6	-2.435	0.013
				>18.6	0.513	0.649			>18.6	-0.610	0.478

^aP-value for test of significance for homogeneity of slopes (current dioxin continuous, time categorized); C*T=current dioxin-by-time interaction.

^bAnalysis performed on natural logarithm scale; slope based on natural logarithm of clinical parameter versus log₂ (current dioxin).

^cAnalysis performed on natural logarithm (X + 1.0) scale; slope based on natural logarithm (avoidant score + 1.0) versus log₂ (current dioxin).

^dAnalysis performed on square root scale; slope based on square root of clinical parameter versus log₂ (current dioxin).

^eAnalysis performed on square scale; slope based on square of clinical parameter versus log₂ (current dioxin).

^fAnalysis performed on natural logarithm (X + 0.1) scale; slope based on natural logarithm (direct bilirubin + 0.1) versus log₂ (current dioxin).

^gAnalysis performed on natural logarithm (X - 0.4) scale; slope based on natural logarithm (TSH - 0.4) of clinical parameter versus log₂ (current dioxin).

^hAnalysis performed on natural logarithm (1 - X) scale; slope based on natural logarithm (1 - ratio of observed FEV₁ to observed FVC) versus log₂ (current dioxin).

Note: Statistics are based on the relationship of clinical parameter with log₂ (current dioxin) and time unless otherwise specified.

TABLE Q-3.
Summary of Unadjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R^2	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Percent Body Fat	6	0.042	Mean (n): Difference (p-value):	21.91 (786)	20.03 (345) -1.88 (<0.001)	22.15 (196) 0.24 (0.549)	23.55 (187) 1.64 (<0.001)	<0.001
Sedimentation Rate ^b (mm/hr)	6	0.010	Mean (n): Difference (p-value):	5.09 (786)	4.52 (345) -0.57 (0.025)	5.77 (196) 0.68 (0.053)	5.68 (187) 0.59 (0.099)	0.002
Average Sleep Each Night (hours)	9	0.002	Mean (n): Difference (p-value):	6.89 (783)	6.92 (341) 0.03 (0.638)	6.91 (194) 0.02 (0.809)	6.77 (185) -0.12 (0.149)	0.403
MCMI: Basic Personality Patterns								
Schizoid Score ^b	9	0.011	Mean (n): Difference (p-value):	23.7 (781)	22.7 (340) -1.1 (0.229)	24.9 (194) 1.2 (0.306)	27.9 (184) 4.2 (<0.001)	<0.001
Avoidant Score ^c	9	0.006	Mean (n): Difference (p-value):	16.3 (781)	15.0 (340) -1.3 (0.164)	16.8 (194) 0.5 (0.667)	19.1 (184) 2.8 (0.032)	0.035
Dependent Score ^d	9	0.006	Mean (n): Difference (p-value):	42.1 (781)	39.3 (340) -2.8 (0.032)	39.2 (194) -2.9 (0.066)	43.4 (184) 1.3 (0.451)	0.033
Histrionic Score ^e	9	0.007	Mean (n): Difference (p-value):	64.4 (781)	64.6 (340) 0.2 (0.806)	63.2 (194) -1.2 (0.287)	60.9 (184) -3.5 (0.003)	0.014
Narcissistic Score	9	0.006	Mean (n): Difference (p-value):	64.0 (781)	66.0 (340) 2.0 (0.048)	65.5 (194) 1.5 (0.225)	62.1 (184) -1.9 (0.122)	0.025
Antisocial Score	9	0.005	Mean (n): Difference (p-value):	59.6 (781)	61.6 (340) 2.0 (0.117)	63.3 (194) 3.7 (0.016)	61.2 (184) 1.6 (0.300)	0.074

TABLE Q-3. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistica	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Compulsive Score ^e	9	<0.001	Mean (n): Difference (p-value):	68.4 (781)	68.7 (340) 0.3 (0.621)	68.7 (194) 0.3 (0.641)	68.1 (184) -0.3 (0.621)	0.838
Passive-Aggressive Score ^d	9	0.005	Mean (n): Difference (p-value):	19.0 (781)	17.6 (340) -1.4 (0.132)	20.8 (194) 1.8 (0.128)	20.4 (184) 1.4 (0.268)	0.054
MCMI: Pathological Personality Disorders								
Schizotypal Score	9	0.009	Mean (n): Difference (p-value):	33.9 (781)	31.9 (340) -1.9 (0.114)	34.0 (194) 0.2 (0.914)	38.4 (184) 4.5 (0.004)	0.003
Borderline Score	9	0.003	Mean (n): Difference (p-value):	33.3 (781)	31.0 (340) -2.4 (0.033)	32.5 (194) -0.8 (0.567)	33.5 (184) 0.2 (0.882)	0.170
Paranoid Score	9	0.003	Mean (n): Difference (p-value):	51.5 (781)	52.9 (340) 1.3 (0.187)	53.6 (194) 2.0 (0.104)	53.5 (184) 2.0 (0.118)	0.191
MCMI: Clinical Symptom Syndromes								
Anxiety Score	9	0.006	Mean (n): Difference (p-value):	47.2 (781)	44.1 (340) -3.1 (0.023)	46.4 (194) -0.8 (0.630)	49.3 (184) 2.1 (0.231)	0.038
Somatoform Score	9	0.002	Mean (n): Difference (p-value):	51.1 (781)	50.2 (340) -0.9 (0.445)	50.1 (194) -0.9 (0.500)	52.7 (184) 1.6 (0.260)	0.407
Hypomania Score ^d	9	0.003	Mean (n): Difference (p-value):	21.9 (781)	22.4 (340) 0.5 (0.742)	22.4 (194) 0.5 (0.795)	18.3 (184) -3.5 (0.071)	0.251
Dysthymia Score	9	0.003	Mean (n): Difference (p-value):	49.7 (781)	47.1 (340) -2.5 (0.078)	49.4 (194) -0.3 (0.886)	51.5 (184) 1.8 (0.329)	0.159

TABLE Q-3. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Alcohol Abuse Score	9	<0.001	Mean (n): Difference (p-value):	31.3 (781)	30.5 (340) -0.8 (0.443)	31.0 (194) -0.3 (0.810)	31.0 (184) -0.3 (0.811)	0.898
Drug Abuse Score	9	0.001	Mean (n): Difference (p-value):	48.2 (781)	47.2 (340) -1.0 (0.429)	48.9 (194) 0.7 (0.659)	47.4 (184) -0.8 (0.619)	0.746
Psychotic Thinking Score	9	0.009	Mean (n): Difference (p-value):	32.6 (781)	30.1 (340) -2.5 (0.053)	31.9 (194) -0.7 (0.643)	36.7 (184) 4.1 (0.012)	0.004
Psychotic Depression Score	9	0.005	Mean (n): Difference (p-value):	23.6 (781)	21.4 (340) -2.2 (0.091)	22.8 (194) -0.8 (0.633)	26.1 (184) 2.6 (0.119)	0.070
Psychotic Delusion Score	9	0.005	Mean (n): Difference (p-value):	42.1 (781)	43.1 (340) 0.9 (0.497)	45.1 (194) 3.0 (0.073)	45.9 (184) 3.7 (0.026)	0.076
AST ^b (U/L)	10	0.003	Mean (n): Difference (p-value):	25.70 (779)	24.93 (341) -0.77 (0.120)	25.46 (193) -0.24 (0.704)	26.20 (186) 0.50 (0.434)	0.276
ALT ^b (U/L)	10	0.012	Mean (n): Difference (p-value):	20.62 (779)	19.06 (341) -1.56 (0.011)	21.01 (193) 0.39 (0.634)	22.97 (186) 2.35 (0.006)	<0.001
GGT ^b (U/L)	10	0.015	Mean (n): Difference (p-value):	32.03 (779)	28.75 (341) -3.28 (0.009)	34.99 (193) 2.96 (0.083)	36.82 (186) 4.79 (0.007)	<0.001
Alkaline Phosphatase ^b (U/L)	10	0.005	Mean (n): Difference (p-value):	90.28 (779)	91.94 (341) 1.66 (0.245)	93.92 (193) 3.64 (0.041)	94.07 (186) 3.79 (0.036)	0.064
D-Glucaric Acid ^d (μ M)	10	0.002	Mean (n): Difference (p-value):	14.14 (746)	14.09 (328) -0.05 (0.953)	14.62 (190) 0.48 (0.672)	15.85 (182) 1.71 (0.147)	0.504

TABLE Q-3. (Continued)

Summary of Unadjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Total Bilirubin ^b (mg/dl)	10	0.002	Mean (n): Difference (p-value):	0.793 (779)	0.773 (341) -0.020 (0.191)	0.770 (193) -0.023 (0.229)	0.786 (186) -0.007 (0.715)	0.466
Direct Bilirubin ^f (mg/dl)	10	0.004	Mean (n): Difference (p-value):	0.149 (779)	0.148 (341) -0.001 (0.846)	0.157 (193) 0.008 (0.444)	0.171 (186) 0.022 (0.025)	0.120
LDH ^b (U/L)	10	<0.001	Mean (n): Difference (p-value):	127.9 (779)	126.7 (341) -1.2 (0.361)	127.6 (193) -0.3 (0.821)	128.6 (186) 0.7 (0.715)	0.751
Cholesterol ^b (mg/dl)	10	0.002	Mean (n): Difference (p-value):	213.3 (779)	214.3 (341) 1.0 (0.669)	215.0 (193) 1.7 (0.570)	218.7 (186) 5.4 (0.085)	0.386
HDL ^b (mg/dl)	10	0.019	Mean (n): Difference (p-value):	44.98 (779)	47.81 (341) 2.83 (<0.001)	43.60 (193) -1.38 (0.115)	43.07 (186) -1.91 (0.031)	<0.001
Cholesterol-HDL Ratio ^b	10	0.019	Mean (n): Difference (p-value):	4.74 (779)	4.48 (341) -0.26 (0.002)	4.93 (193) 0.19 (0.082)	5.08 (186) 0.34 (0.003)	<0.001
Triglycerides ^b (mg/dl)	10	0.024	Mean (n): Difference (p-value):	116.8 (779)	104.1 (341) -12.7 (0.005)	140.0 (193) 23.2 (<0.001)	135.8 (186) 19.0 (0.004)	<0.001
Creatine Kinase ^b (U/L)	10	0.002	Mean (n): Difference (p-value):	109.4 (779)	106.2 (341) -3.2 (0.368)	107.1 (193) -2.3 (0.604)	113.5 (186) 4.1 (0.374)	0.504

TABLE Q-3. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistica	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Systolic Blood Pressure (mm Hg)	12	0.003	Mean (n): Difference (p-value):	126.65 (703) -1.48 (0.205)	125.17 (320) 0.13 (0.927)	126.79 (177) 1.89 (0.218)	128.54 (155) 1.89 (0.218)	0.247
Diastolic Blood Pressure (mm Hg)	12	0.008	Mean (n): Difference (p-value):	74.54 (703) -0.50 (0.429)	74.04 (320) 1.71 (0.028)	76.25 (177) 1.61 (0.051)	76.15 (155) 1.61 (0.051)	0.017
Red Blood Cell Count (million/mm ³)	13	0.004	Mean (n): Difference (p-value):	4.960 (783) -0.041 (0.088)	4.918 (345) -0.001 (0.983)	4.959 (195) 0.033 (0.274)	4.993 (187) 0.033 (0.274)	0.147
White Blood Cell Count ^b (thousand/mm ³)	13	0.007	Mean (n): Difference (p-value):	6.668 (783) 0.032 (0.799)	6.700 (345) 0.282 (0.072)	6.950 (195) 0.456 (0.005)	7.124 (187) 0.456 (0.005)	0.017
Hemoglobin (gm/dl)	13	0.002	Mean (n): Difference (p-value):	15.652 (783) 0.021 (0.755)	15.673 (345) 0.088 (0.291)	15.740 (195) 0.144 (0.090)	15.796 (187) 0.144 (0.090)	0.323
Hematocrit (percent)	13	0.002	Mean (n): Difference (p-value):	45.208 (783) -0.075 (0.700)	45.132 (345) 0.128 (0.597)	45.336 (195) 0.351 (0.155)	45.559 (187) 0.351 (0.155)	0.428
Mean Corpuscular Volume (cubic micra)	13	0.003	Mean (n): Difference (p-value):	91.276 (783) 0.594 (0.057)	91.871 (345) 0.283 (0.463)	91.559 (195) 0.049 (0.901)	91.325 (187) 0.049 (0.901)	0.277
Mean Corpuscular Hemoglobin (micromicrogram)	13	0.005	Mean (n): Difference (p-value):	31.633 (783) 0.289 (0.012)	31.923 (345) 0.180 (0.203)	31.814 (195) 0.044 (0.760)	31.678 (187) 0.044 (0.760)	0.072
Mean Corpuscular Hemoglobin Concentration (gm/dl)	13	0.006	Mean (n): Difference (p-value):	34.629 (783) 0.094 (0.007)	34.723 (345) 0.093 (0.031)	34.722 (195) 0.029 (0.515)	34.657 (187) 0.029 (0.515)	0.022

TABLE Q-3. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Platelet Count (thousand/mm ³)	13	0.004	Mean (n): Difference (p-value):	259.01 (783) 2.80 (0.440)	261.81 (345) 6.21 (0.168)	265.22 (195) 11.05 (0.016)	270.05 (187)	0.083
Prothrombin Time ^b (seconds)	13	0.002	Mean (n): Difference (p-value):	12.256 (785) -0.037 (0.278)	12.219 (345) -0.049 (0.247)	12.207 (195) 0.036 (0.409)	12.292 (186)	0.305
Blood Urea Nitrogen ^d (mg/dl)	14	0.002	Mean (n): Difference (p-value):	14.7 (786) -0.1 (0.668)	14.6 (345) -0.4 (0.162)	14.3 (196) -0.3 (0.269)	14.4 (187)	0.443
Urine Specific Gravity	14	0.002	Mean (n): Difference (p-value):	1.0200 (786) -0.0004 (0.363)	1.0197 (345) 0.0001 (0.911)	1.0201 (196) 0.0005 (0.351)	1.0205 (187)	0.518
T ₃ % Uptake ^b	15	0.008	Mean (n): Difference (p-value):	30.65 (772) 0.01 (0.947)	30.66 (338) -0.30 (0.133)	30.35 (194) -0.62 (0.002)	30.03 (181)	0.010
TSH ^g (μIU/ml)	15	0.003	Mean (n): Difference (p-value):	0.964 (641) 0.033 (0.328)	0.997 (278) 0.059 (0.165)	1.023 (155) 0.068 (0.113)	1.032 (157)	0.275
FSH ^b (mIU/ml)	15	0.001	Mean (n): Difference (p-value):	7.57 (786) 0.39 (0.277)	7.96 (345) 0.20 (0.636)	7.77 (196) -0.21 (0.639)	7.36 (187)	0.602
Testosterone ^d (ng/dl)	15	0.007	Mean (n): Difference (p-value):	525.3 (785) 28.9 (0.005)	554.2 (343) 0.3 (0.977)	525.6 (193) -10.3 (0.422)	515.0 (187)	0.016
Fasting Glucose ^b (mg/dl)	15	0.017	Mean (n): Difference (p-value):	99.5 (779) -1.2 (0.206)	98.3 (341) 1.2 (0.331)	100.7 (193) 5.6 (<0.001)	105.1 (186)	<0.001
2-Hour Postprandial Glucose ^b (mg/dl)	15	0.005	Mean (n): Difference (p-value):	111.3 (740) -3.8 (0.049)	107.5 (331) -1.5 (0.527)	109.8 (179) 2.9 (0.263)	114.2 (166)	0.082

TABLE Q-3. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
CD2 Cells ^b (cells/mm ³)	16	0.002	Mean (n): 1,615.9 (307) Difference (p-value): -47.3 (0.405)	1,568.6 (130) 20.3 (0.777)	1,636.2 (74) 35.6 (0.618)	1,651.5 (76)	35.6 (0.618)	0.712
CD4 Cells ^b (cells/mm ³)	16	0.006	Mean (n): 907.8 (301) Difference (p-value): -46.3 (0.216)	861.5 (127) 30.8 (0.525)	938.6 (72) 34.4 (0.478)	942.2 (72)	34.4 (0.478)	0.351
CD8 Cells ^b (cells/mm ³)	16	<0.001	Mean (n): 471.8 (301) Difference (p-value): 13.4 (0.581)	485.2 (126) -2.6 (0.930)	469.2 (72) 9.8 (0.741)	481.6 (73)	9.8 (0.741)	0.937
CD20 Cells ^b (cells/mm ³)	16	0.213	Mean (n): 148.9 (301) Difference (p-value): 5.4 (0.544)	154.3 (127) 12.8 (0.260)	161.7 (72) 22.2 (0.066)	171.1 (73)	22.2 (0.066)	0.269
CD14 Cells ^b (cells/mm ³)	16	0.348	Mean (n): 32.7 (301) Difference (p-value): -0.5 (0.844)	32.2 (127) -2.3 (0.476)	30.4 (73) -3.6 (0.260)	29.1 (74)	-3.6 (0.260)	0.674
CD25 Cells ^b (cells/mm ³)	16	0.538	Mean (n): 11.0 (214) Difference (p-value): 2.0 (0.221)	13.0 (90) -0.6 (0.770)	10.4 (51) 0.5 (0.760)	11.5 (57)	0.5 (0.760)	0.612
HLA-DR Cells ^b (cells/mm ³)	16	0.360	Mean (n): 422.5 (300) Difference (p-value): 11.2 (0.574)	433.7 (127) 37.0 (0.138)	459.5 (73) 10.7 (0.664)	433.2 (74)	10.7 (0.664)	0.520
CD4/CD8 Ratio ^b	16	0.302	Mean (n): 1.89 (301) Difference (p-value): -0.18 (0.068)	1.71 (126) 0.01 (0.969)	1.90 (72) 0.09 (0.548)	1.98 (72)	0.09 (0.548)	0.196
TLC ^b (cpm)	16	0.002	Mean (n): 1,972.0 (301) Difference (p-value): -17.8 (0.789)	1,954.2 (127) 39.6 (0.635)	2,011.6 (73) 60.4 (0.468)	2,032.4 (74)	60.4 (0.468)	0.817

TABLE Q-3. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Unstimulated PHA Response ^b (cpm)	16	0.541	Mean (n): Difference (p-value):	2,003 (297)	1,962 (123) -41 (0.689)	2,129 (71) 126 (0.332)	2,064 (73) 61 (0.640)	0.679
PHA Net Response (cpm) (Concentration 1)	16	0.668	Mean (n): Difference (p-value):	126,096 (297)	129,147 (121) 3,051 (0.552)	130,539 (71) 4,444 (0.472)	130,671 (72) 4,575 (0.471)	0.810
PHA Net Response (cpm) (Concentration 2)	16	0.670	Mean (n): Difference (p-value):	166,313 (297)	160,792 (121) -5,521 (0.301)	171,010 (71) 4,696 (0.465)	181,128 (72) 14,815 (0.025)	0.042
PHA Net Response (cpm) (Concentration 3)	16	0.577	Mean (n): Difference (p-value):	131,602 (297)	129,248 (121) -2,354 (0.658)	141,174 (71) 9,572 (0.135)	140,193 (72) 8,591 (0.191)	0.223
PHA Net Response (cpm) (Across Day and Concentration)	16	0.678	Mean (n): Difference (p-value):	141,337 (297)	139,729 (121) -1,608 (0.723)	147,574 (71) 6,237 (0.253)	150,664 (72) 9,327 (0.096)	0.221
Maximum PHA Net Response (cpm)	16	0.699	Mean (n): Difference (p-value):	200,475 (297)	194,152 (121) -6,323 (0.255)	201,590 (71) 1,115 (0.867)	216,159 (72) 15,684 (0.022)	0.037
Unstimulated MLC Response (cpm)	16	0.443	Mean (n): Difference (p-value):	3,619 (294)	3,691 (124) 72 (0.820)	4,065 (72) 446 (0.269)	4,773 (71) 1,154 (0.011)	0.070
MLC Net Response ^b (cpm)	16	0.558	Mean (n): Difference (p-value):	88,293 (294)	89,021 (124) 728 (0.876)	91,936 (72) 3,643 (0.516)	82,307 (71) -5,986 (0.304)	0.582
NCKA 50/1 Net Response (cpm)	16	0.347	Mean (n): Difference (p-value):	416.7 (291)	423.3 (126) 6.6 (0.759)	373.6 (71) -43.1 (0.106)	387.9 (72) -28.8 (0.291)	0.266

TABLE Q-3. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
NCKA 50/1 Percent Release	16	0.008	Mean (n): Difference (p-value):	35.9 (291)	36.8 (126) 0.9 (0.562)	32.4 (71) -3.6 (0.072)	34.6 (72) -1.3 (0.499)	0.199
NCKI 50/1 Net Response (cpm)	16	0.819	Mean (n): Difference (p-value):	808.9 (298)	802.3 (123) -6.6 (0.620)	817.5 (72) 8.6 (0.596)	802.6 (74) -6.3 (0.701)	0.843
NCKI 50/1 Percent Release	16	0.499	Mean (n): Difference (p-value):	66.6 (298)	65.9 (123) -0.7 (0.488)	66.8 (72) 0.2 (0.867)	65.7 (74) -0.9 (0.500)	0.821
IgA ^b (mg/dl)	16	0.007	Mean (n): Difference (p-value):	212.1 (759)	195.1 (338) -17.0 (0.003)	210.0 (192) -2.1 (0.769)	216.1 (179) 4.0 (0.604)	0.013
IgG ^b (mg/dl)	16	0.005	Mean (n): Difference (p-value):	1,024.2 (759)	986.5 (338) -37.7 (0.008)	1,021.3 (192) -2.9 (0.874)	1,020.4 (179) -3.8 (0.837)	0.058
IgM ^b (mg/dl)	16	0.005	Mean (n): Difference (p-value):	110.3 (759)	113.9 (338) 3.6 (0.301)	103.1 (192) -7.2 (0.076)	115.0 (179) 4.7 (0.294)	0.079
FVC (% of predicted)	17	0.013	Mean (n): Difference (p-value):	97.5 (786)	99.1 (344) 1.5 (0.075)	96.0 (196) -1.6 (0.141)	93.9 (187) -3.6 (0.001)	<0.001
FEV ₁ (% of predicted)	17	0.002	Mean (n): Difference (p-value):	98.4 (786)	98.7 (344) 0.3 (0.795)	96.4 (196) -2.0 (0.102)	97.5 (187) -1.0 (0.449)	0.321
FEFmax (% of predicted)	17	0.005	Mean (n): Difference (p-value):	137.7 (786)	139.1 (344) 1.5 (0.347)	134.2 (196) -3.5 (0.066)	135.4 (187) -2.3 (0.228)	0.077
Ratio of Observed FEV ₁ to Observed FVC ^h	17	0.028	Mean (n): Difference (p-value):	0.814 (786)	0.802 (344) -0.011 (0.007)	0.810 (196) -0.003 (0.504)	0.838 (187) 0.025 (<0.001)	<0.001

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TABLE Q-3. (Continued)
Summary of Unadjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

^aDifferences are relative to background mean.

^bMeans transformed from natural logarithm scale; difference of means calculated after transformation to original scale; p-value based on difference of means on natural logarithm scale.

^cMeans transformed from natural logarithm ($X + 1.0$) scale; difference of means calculated after transformation to original scale; p-value based on difference of means on natural logarithm ($X + 1.0$) scale.

^dMeans transformed from square root scale; difference of means calculated after transformation to original scale; p-value based on difference of means on square root scale.

^eMeans transformed from square scale; difference of means calculated after transformation to original scale; p-value based on difference of means of square scale.

^fMeans transformed from natural logarithm ($X + 0.1$) scale; difference of means calculated after transformation to original scale; p-value based on difference of means on natural logarithm ($X + 0.1$) scale.

^gMeans transformed from natural logarithm ($X - 0.4$) scale; difference of means calculated after transformation to original scale; p-value based on difference of means on natural logarithm (TSH - 0.4) scale.

^hMeans transformed from natural logarithm ($1 - X$) scale; difference of means calculated after transformation to original scale; p-value based on difference of means on natural logarithm ($1 - X$) scale.

Note: Background (Comparisons): Current Dioxin ≤ 10 ppt.

Unknown (Ranch Hands): Current Dioxin ≤ 10 ppt.

Low (Ranch Hands): $15 \text{ ppt} < \text{Current Dioxin} \leq 33.3 \text{ ppt}$.

High (Ranch Hands): Current Dioxin > 33.3 ppt.

TABLE Q-4.
Summary of Unadjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	<u>Minimal Assumption</u>		<u>Maximal Assumption</u>	
		Est. Relative Risk (95% C.I.)	p-Value	Est. Relative Risk (95% C.I.)	p-Value
Self-Perception of Health	6	1.10 (0.85,1.44)	0.471	1.23 (1.00,1.50)	0.058
Appearance of Illness or Distress by Physician	6	1.36 (0.60,3.09)	0.478	1.61 (0.81,3.21)	0.195
Relative Age	6	1.11 (0.81,1.53)	0.517	1.08 (0.86,1.37)	0.512
Percent Body Fat	6	1.23 (1.05,1.44)	0.012	1.32 (1.17,1.49)	<0.001
Sedimentation Rate	6	1.09 (0.85,1.40)	0.509	1.20 (0.99,1.46)	0.064
All Skin Neoplasms	7	0.77 (0.62,0.96)	0.014	0.88 (0.75,1.02)	0.092
Malignant Skin Neoplasms	7	0.70 (0.52,0.95)	0.014	0.86 (0.70,1.05)	0.136
Benign Skin Neoplasms (Non-Blacks Only)	7	0.93 (0.70,1.25)	0.635	0.97 (0.79,1.20)	0.771
Benign Skin Neoplasms (Blacks Included)	7	0.93 (0.70,1.24)	0.609	0.97 (0.79,1.20)	0.773
Skin Neoplasms of Uncertain Behavior or Unspecified Nature	7	--	--	--	--
<u>Basal Cell Carcinoma</u>	7	0.73 (0.53,1.00)	0.037	0.84 (0.68,1.05)	0.114
Ear, Face, Head, and Neck	7	0.51 (0.31,0.83)	0.002	0.71 (0.53,0.96)	0.017
Trunk	7	0.89 (0.54,1.46)	0.632	1.00 (0.70,1.43)	0.999
Upper Extremities	7	0.45 (0.08,2.68)	0.305	0.62 (0.24,1.58)	0.264
Lower Extremities	7	--	--	--	--
Other Sites	7	1.32 (0.64,2.69)	0.469	1.58 (0.87,2.86)	0.151
<u>Sun Exposure-Related</u>					
<u>Malignant Skin Neoplasms</u>	7	0.70 (0.51,0.95)	0.014	0.85 (0.69,1.04)	0.103
Ear, Face, Head, and Neck	7	0.56 (0.36,0.86)	0.003	0.75 (0.58,0.99)	0.031
Trunk	7	0.69 (0.41,1.16)	0.132	0.92 (0.66,1.30)	0.648
Upper Extremities	7	1.06 (0.43,2.62)	0.908	0.96 (0.50,1.83)	0.890
Lower Extremities	7	--	--	--	--
Other Sites	7	1.32 (0.64,2.69)	0.469	1.58 (0.87,2.86)	0.151
<u>Melanoma</u>	7	0.01 (0.00,1.60)	0.011	0.52 (0.16,1.74)	0.223
Ear, Face, Head, and Neck	7	--	--	--	--
Trunk	7	--	0.011	0.52 (0.12,2.28)	0.315
Upper Extremities	7	--	--	--	--
Lower Extremities	7	--	--	--	--
Other Sites	7	--	--	--	--
Squamous Cell Carcinoma	7	0.90 (0.34,2.42)	0.836	1.24 (0.60,2.60)	0.573
<u>Basal Cell Carcinoma by Occupation</u>					
Officer-Ear, Face, Head, and Neck vs. None	7	1.15 (0.25,5.26)	0.860	1.41 (0.67,2.97)	0.372
Officer-Other Sites vs. None	7	--	--	0.87 (0.27,2.78)	0.814

TABLE Q-4. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	<u>Minimal Assumption</u>		<u>Maximal Assumption</u>	
		Est. Relative Risk (95% C.I.)	p-Value	Est. Relative Risk (95% C.I.)	p-Value
Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7	0.55 (0.17,1.82)	0.290	0.58 (0.27,1.24)	0.138
Enlisted Flyer-Other Sites vs. None	7	2.28 (0.98,5.33)	0.050	2.48 (1.13,5.44)	0.015
Enlisted Groundcrew-Ear, Face, Head, and Neck vs. None	7	0.43 (0.22,0.84)	0.005	0.65 (0.41,1.03)	0.051
Enlisted Groundcrew-Other Sites vs. None	7	0.56 (0.27,1.18)	0.096	0.83 (0.49,1.43)	0.501
<u>Sun Exposure-Related Malignant Skin Neoplasm by Occupation</u>					
Officer-Ear, Face, Head, and Neck vs. None	7	0.83 (0.18,3.80)	0.804	1.40 (0.69,2.83)	0.355
Officer-Other Sites vs. None	7	0.61 (0.04,8.63)	0.700	0.90 (0.32,2.49)	0.833
Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7	0.54 (0.18,1.63)	0.233	0.62 (0.30,1.25)	0.157
Enlisted Flyer-Other Sites vs. None	7	2.27 (0.97,5.30)	0.052	2.47 (1.13,5.42)	0.015
Enlisted Groundcrew-Ear, Face, Head, and Neck vs. None	7	0.54 (0.30,0.97)	0.022	0.73 (0.48,1.12)	0.133
Enlisted Groundcrew-Other Sites vs. None	7	0.57 (0.27,1.18)	0.098	0.84 (0.49,1.44)	0.507
Basal Cell Carcinoma (One vs. None)	7	0.82 (0.58,1.16)	0.244	0.89 (0.69,1.13)	0.314
Basal Cell Carcinoma (Multiple vs. None)	7	0.49 (0.24,1.01)	0.026	0.74 (0.48,1.14)	0.147
All Systemic Neoplasms	7	1.13 (0.89,1.42)	0.319	1.28 (1.07,1.53)	0.009
Malignant Systemic Neoplasms	7	0.56 (0.29,1.07)	0.048	0.90 (0.60,1.35)	0.598
Benign Systemic Neoplasms	7	1.36 (1.05,1.76)	0.022	1.41 (1.15,1.72)	0.001
Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	7	0.82 (0.28,2.34)	0.693	1.17 (0.55,2.52)	0.691
<u>Systemic Neoplasm: Location/Site</u>					
Ear, Face, Head, and Neck	7	--	--	--	--
Oral Cavity, Pharynx, and Larynx	7	--	--	--	--
Brain	7	--	--	--	--
Thymus and Mediastinum	7	--	--	--	--
Thyroid Gland	7	--	--	--	--
Bronchus and Lung	7	--	--	--	--
Colon and Rectum	7	--	--	--	--
Kidney and Bladder	7	0.64 (0.23,1.83)	0.368	0.86 (0.43,1.73)	0.673
Prostate	7	0.64 (0.15,2.82)	0.522	1.04 (0.39,2.81)	0.933

TABLE Q-4. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption		Maximal Assumption	
		Est. Relative Risk (95% C.I.)	p-Value	Est. Relative Risk (95% C.I.)	p-Value
Testicles	7	0.59 (0.17,2.09)	0.363	1.00 (0.44,2.30)	0.999
Ill-Defined Sites	7	--	--	--	--
Carcinoma in Situ of Penis	7	--	--	--	--
Carcinoma in Situ of Other and Unspecified Sites	7	--	--	--	--
Hodgkin's Disease	7	--	--	--	--
Leukemia	7	--	--	--	--
Other Malignant Neoplasms of Lymphoid and Histiocytic Tissue	7	--	--	0.84 (0.27,2.57)	0.745
All Skin and Systemic Neoplasms	7	0.93 (0.78,1.10)	0.384	1.03 (0.91,1.17)	0.661
Inflammatory Diseases	8	1.18 (0.41,3.43)	0.761	1.46 (0.62,3.46)	0.409
Heredity and Degenerative Diseases	8	0.90 (0.62,1.31)	0.565	0.94 (0.72,1.24)	0.684
Peripheral Disorders	8	1.01 (0.83,1.24)	0.900	1.00 (0.86,1.16)	0.999
Disorders of the Eye	8	1.05 (0.87,1.26)	0.602	1.05 (0.92,1.21)	0.475
Tympanic Membrane Disorder	8	0.94 (0.68,1.29)	0.684	1.01 (0.80,1.27)	0.959
Otitis	8	1.04 (0.82,1.31)	0.761	0.90 (0.76,1.08)	0.246
Hearing Loss	8	0.95 (0.81,1.11)	0.504	0.94 (0.84,1.06)	0.344
Other Neurological Disorders	8	1.07 (0.91,1.26)	0.392	1.24 (1.09,1.40)	<0.001
Smell	8	0.61 (0.21,1.79)	0.324	0.88 (0.44,1.75)	0.708
Visual Fields	8	--	--	--	--
Light Reaction	8	1.49 (0.67,3.30)	0.346	0.98 (0.54,1.77)	0.950
Ocular Movement	8	0.97 (0.37,2.53)	0.958	1.02 (0.51,2.08)	0.944
Facial Sensation	8	0.87 (0.31,2.40)	0.779	1.21 (0.57,2.58)	0.628
Smile	8	1.87 (0.88,3.98)	0.124	1.24 (0.69,2.21)	0.485
Palpebral Fissure	8	1.27 (0.76,2.14)	0.376	1.13 (0.75,1.70)	0.564
Balance	8	1.10 (0.36,3.30)	0.871	1.39 (0.58,3.34)	0.479
Speech	8	--	--	--	--
Neck Range of Motion	8	1.04 (0.82,1.31)	0.748	0.92 (0.78,1.10)	0.356
Cranial Nerve Index	8	1.03 (0.83,1.26)	0.812	0.95 (0.81,1.10)	0.467
Cranial Nerve Index Without Range of Motion	8	1.05 (0.75,1.48)	0.760	1.06 (0.82,1.37)	0.653
Pin Prick	8	1.01 (0.76,1.34)	0.941	1.05 (0.85,1.30)	0.632
Light Touch	8	0.99 (0.69,1.40)	0.928	1.01 (0.78,1.30)	0.940
Muscle Status	8	1.03 (0.61,1.71)	0.922	1.17 (0.79,1.72)	0.439
Vibration	8	0.87 (0.50,1.52)	0.620	1.07 (0.72,1.60)	0.737
Patellar Reflex	8	1.12 (0.68,1.83)	0.661	1.23 (0.84,1.79)	0.304
Achilles Reflex	8	0.95 (0.70,1.28)	0.718	1.14 (0.91,1.42)	0.273
Biceps Reflex	8	--	--	--	--
Babinski Reflex	8	1.37 (0.51,3.73)	0.552	1.62 (0.70,3.75)	0.285
Tremor	8	1.08 (0.69,1.67)	0.744	1.08 (0.78,1.50)	0.643
Coordination	8	1.25 (0.74,2.11)	0.414	1.35 (0.89,2.06)	0.178

TABLE Q-4. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption		Maximal Assumption	
		Est. Relative Risk (95% C.I.)	p-Value	Est. Relative Risk (95% C.I.)	p-Value
Romberg Sign	8	1.10 (0.36,3.30)	0.871	1.39 (0.58,3.34)	0.479
Gait	8	1.27 (0.87,1.87)	0.236	1.25 (0.93,1.69)	0.154
CNS Index	8	1.23 (0.92,1.64)	0.171	1.24 (0.99,1.55)	0.064
Psychoses	9	0.64 (0.36,1.14)	0.099	1.04 (0.70,1.54)	0.841
Alcohol Dependence	9	1.00 (0.76,1.30)	0.999	1.09 (0.89,1.32)	0.413
Drug Dependence	9	--	--	--	--
Anxiety	9	1.14 (0.95,1.37)	0.159	1.16 (1.01,1.34)	0.034
Other Neuroses	9	1.08 (0.94,1.25)	0.268	1.17 (1.05,1.30)	0.004
Trouble Falling Asleep	9	0.97 (0.75,1.24)	0.779	1.01 (0.84,1.22)	0.875
Waking Up During The Night	9	0.92 (0.74,1.13)	0.411	0.96 (0.82,1.12)	0.632
Waking Up Too Early and Can't Go Back to Sleep	9	0.94 (0.74,1.18)	0.576	1.01 (0.85,1.21)	0.874
Waking Up Unrefreshed	9	1.15 (0.93,1.43)	0.213	1.21 (1.03,1.43)	0.027
Involuntarily Falling Asleep During the Day	9	0.85 (0.59,1.24)	0.399	1.02 (0.79,1.33)	0.871
Great or Disabling Fatigue During the Day	9	0.92 (0.65,1.31)	0.653	1.13 (0.87,1.46)	0.372
Frightening Dreams	9	1.19 (0.88,1.61)	0.270	1.33 (1.04,1.68)	0.025
Talking in Sleep	9	1.14 (0.85,1.54)	0.389	1.21 (0.96,1.53)	0.112
Sleepwalking	9	1.03 (0.67,1.59)	0.894	1.13 (0.82,1.56)	0.462
Abnormal Movement/Activity During the Night	9	1.09 (0.78,1.52)	0.613	1.23 (0.95,1.60)	0.126
Sleep Problems Requiring Medication	9	0.63 (0.32,1.23)	0.136	0.76 (0.49,1.18)	0.193
Snore Loudly in All Sleeping Positions	9	0.94 (0.73,1.21)	0.629	1.11 (0.92,1.34)	0.290
Insomnia	9	0.92 (0.77,1.09)	0.338	0.98 (0.86,1.11)	0.694
Overall Sleep Disorder Index	9	0.95 (0.82,1.10)	0.476	1.03 (0.92,1.14)	0.662
SCL-90-R					
Anxiety	9	1.21 (0.94,1.56)	0.149	1.27 (1.04,1.55)	0.022
Depression	9	1.24 (0.98,1.57)	0.075	1.23 (1.02,1.48)	0.029
Hostility	9	1.10 (0.80,1.52)	0.555	1.21 (0.95,1.55)	0.140
Interpersonal Sensitivity	9	1.20 (0.90,1.58)	0.220	1.22 (0.98,1.52)	0.084
Obsessive-Compulsive Behavior	9	1.24 (0.98,1.58)	0.080	1.36 (1.12,1.65)	0.002
Paranoid Ideation	9	0.81 (0.54,1.22)	0.302	0.91 (0.67,1.22)	0.511
Phobic Anxiety	9	1.08 (0.82,1.42)	0.585	1.19 (0.96,1.46)	0.115
Psychoticism	9	1.20 (0.95,1.51)	0.144	1.25 (1.04,1.50)	0.022
Somatization	9	1.06 (0.84,1.33)	0.634	1.19 (0.99,1.41)	0.064
Global Severity Index	9	1.25 (0.98,1.58)	0.073	1.27 (1.06,1.53)	0.013
Positive Symptom Total	9	1.25 (0.98,1.61)	0.079	1.23 (1.01,1.49)	0.043
Positive Symptom Distress Index	9	1.01 (0.80,1.28)	0.922	1.13 (0.94,1.35)	0.187
Viral Hepatitis	10	1.04 (0.90,1.20)	0.613	1.11 (1.00,1.24)	0.051
Chronic Liver Disease and Cirrhosis (Alcohol-Related)	10	0.89 (0.62,1.29)	0.543	0.91 (0.70,1.19)	0.488

TABLE Q-4. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	<u>Minimal Assumption</u>		<u>Maximal Assumption</u>	
		Est. Relative Risk (95% C.I.)	p-Value	Est. Relative Risk (95% C.I.)	p-Value
Chronic Liver Disease and Cirrhosis (Nonalcohol-Related)	10	0.67 (0.24,1.86)	0.411	0.88 (0.44,1.75)	0.711
Other Disorders of the Liver	10	1.15 (0.92,1.45)	0.220	1.19 (1.00,1.41)	0.051
Jaundice (Unspecified)	10	1.22 (0.52,2.86)	0.655	0.83 (0.48,1.46)	0.507
Hepatomegaly	10	0.90 (0.55,1.46)	0.657	1.13 (0.80,1.61)	0.502
Ulcer	10	1.12 (0.85,1.48)	0.430	1.16 (0.94,1.43)	0.165
Skin Bruises, Patches, or Sensitivity	10	1.00 (0.86,1.17)	0.999	1.04 (0.93,1.17)	0.484
Current Hepatomegaly	10	0.89 (0.50,1.59)	0.687	1.23 (0.80,1.90)	0.361
AST	10	1.00 (0.72,1.40)	0.999	1.05 (0.82,1.33)	0.720
ALT	10	1.13 (0.93,1.38)	0.235	1.18 (1.02,1.38)	0.031
GGT	10	1.07 (0.85,1.35)	0.574	1.20 (1.00,1.43)	0.052
Alkaline Phosphatase	10	1.21 (0.89,1.64)	0.245	1.25 (0.98,1.59)	0.077
D-Glucaric Acid	10	0.73 (0.18,2.88)	0.631	0.72 (0.30,1.71)	0.430
Total Bilirubin	10	0.46 (0.24,0.89)	0.007	0.68 (0.46,1.00)	0.033
Direct Bilirubin	10	0.68 (0.43,1.06)	0.064	0.90 (0.66,1.21)	0.473
LDH	10	0.60 (0.13,2.77)	0.470	0.47 (0.18,1.28)	0.083
Cholesterol	10	0.93 (0.75,1.15)	0.472	0.94 (0.80,1.09)	0.392
HDL	10	1.18 (0.83,1.68)	0.357	1.11 (0.85,1.46)	0.439
Cholesterol-HDL Ratio	10	1.14 (0.99,1.31)	0.077	1.22 (1.09,1.35)	<0.001
Triglycerides	10	1.32 (1.05,1.67)	0.021	1.31 (1.10,1.57)	0.004
Creatine Kinase	10	0.77 (0.53,1.11)	0.144	0.86 (0.67,1.11)	0.228
Occurrence of Acne (Lifetime)	11	0.94 (0.82,1.09)	0.430	0.99 (0.89,1.09)	0.787
Acne Relative to SEA Tour (Pre/Post-SEA and Post-SEA vs. Pre-SEA and None)	11	0.97 (0.84,1.11)	0.623	1.01 (0.91,1.12)	0.839
Acne Relative to SEA Tour (Post-SEA vs. None)	11	0.92 (0.79,1.07)	0.292	0.97 (0.86,1.08)	0.531
Acne Relative to SEA Tour (Pre/Post-SEA vs. Pre-SEA)	11	1.82 (0.78,4.25)	0.111	1.92 (1.04,3.53)	0.013
Location of Acne (Post-SEA)	11	1.08 (0.81,1.42)	0.611	0.94 (0.76,1.16)	0.554
Location of Acne (Pre/Post-SEA and Post-SEA)	11	1.14 (0.90,1.44)	0.289	0.98 (0.82,1.17)	0.808
Comedones	11	1.09 (0.92,1.30)	0.335	1.06 (0.93,1.20)	0.398
Acneiform Lesions	11	0.97 (0.77,1.22)	0.763	1.17 (0.98,1.39)	0.080
Acneiform Scars	11	1.19 (0.97,1.47)	0.105	1.17 (1.00,1.37)	0.058
Depigmentation	11	0.91 (0.68,1.21)	0.498	1.06 (0.86,1.30)	0.599
Inclusion Cysts	11	0.94 (0.73,1.20)	0.615	0.86 (0.72,1.03)	0.098
Hyperpigmentation	11	1.10 (0.91,1.33)	0.319	1.22 (1.06,1.40)	0.008
Other Abnormalities	11	0.91 (0.77,1.06)	0.226	0.89 (0.79,1.00)	0.057
Dermatology Index	11	1.06 (0.92,1.23)	0.410	1.07 (0.96,1.19)	0.246

TABLE Q-4. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	<u>Minimal Assumption</u>		<u>Maximal Assumption</u>	
		Est. Relative Risk (95% C.I.)	p-Value	Est. Relative Risk (95% C.I.)	p-Value
Reported/Verified Essential Hypertension	12	1.09 (0.93,1.29)	0.300	1.11 (0.98,1.24)	0.098
Reported Heart Disease (Excluding Essential Hypertension)	12	0.88 (0.74,1.05)	0.149	0.85 (0.75,0.96)	0.007
Verified Heart Disease (Excluding Essential Hypertension)	12	0.88 (0.74,1.04)	0.138	0.84 (0.75,0.95)	0.006
Reported/Verified Myocardial Infarction	12	0.91 (0.62,1.32)	0.609	1.13 (0.86,1.48)	0.380
Systolic Blood Pressure	12	0.98 (0.80,1.20)	0.849	1.07 (0.93,1.24)	0.330
Heart Sounds	12	0.93 (0.62,1.40)	0.726	0.98 (0.73,1.31)	0.875
Overall ECG	12	0.92 (0.74,1.15)	0.443	0.97 (0.83,1.14)	0.712
ECG: RBBB	12	1.21 (0.40,3.70)	0.737	1.01 (0.43,2.34)	0.985
ECG: LBBB	12	--	--	--	--
ECG: Nonspecific T-Waves	12	0.89 (0.69,1.14)	0.347	1.04 (0.87,1.24)	0.694
ECG: Bradycardia	12	0.77 (0.46,1.29)	0.298	0.75 (0.53,1.07)	0.092
ECG: Arrhythmia	12	1.25 (0.85,1.84)	0.270	1.08 (0.81,1.43)	0.601
ECG: Other Diagnoses	12	0.85 (0.67,1.07)	0.146	0.88 (0.75,1.04)	0.122
Diastolic Blood Pressure	12	0.95 (0.67,1.36)	0.784	1.05 (0.81,1.36)	0.728
Funduscopic Examination	12	1.22 (0.40,3.72)	0.727	0.94 (0.44,1.99)	0.868
Carotid Bruits	12	0.63 (0.21,1.85)	0.357	0.81 (0.42,1.58)	0.517
Radial Pulses	12	--	--	--	--
Femoral Pulses	12	0.90 (0.51,1.59)	0.703	1.02 (0.68,1.53)	0.922
Popliteal Pulses	12	0.67 (0.39,1.16)	0.124	0.96 (0.67,1.37)	0.802
Dorsalis Pedis Pulses	12	1.13 (0.89,1.42)	0.322	1.16 (0.98,1.38)	0.089
Posterior Tibial Pulses	12	0.81 (0.51,1.27)	0.333	1.17 (0.85,1.61)	0.346
Leg Pulses	12	1.05 (0.85,1.31)	0.636	1.15 (0.98,1.35)	0.085
Peripheral/All Pulses	12	1.04 (0.84,1.29)	0.718	1.15 (0.98,1.34)	0.092
Red Blood Cell Count	13	1.22 (0.81,1.86)	0.357	1.13 (0.82,1.56)	0.453
Hematocrit	13	0.98 (0.56,1.70)	0.943	1.11 (0.74,1.68)	0.611
Mean Corpuscular Volume	13	1.00 (0.80,1.24)	0.999	1.12 (0.95,1.32)	0.179
Mean Corpuscular Hemoglobin	13	1.11 (0.87,1.43)	0.404	1.11 (0.92,1.34)	0.287
Platelet Count	13	1.20 (0.80,1.80)	0.398	1.28 (0.94,1.76)	0.133
Prothrombin Time	13	1.08 (0.71,1.65)	0.722	0.98 (0.72,1.35)	0.924
Kidney Disease	14	0.99 (0.78,1.26)	0.942	1.01 (0.85,1.20)	0.927
Urinary Protein	14	0.96 (0.68,1.36)	0.840	1.00 (0.78,1.29)	0.984
Urinary Occult Blood	14	1.16 (0.91,1.47)	0.242	1.20 (1.00,1.44)	0.059
Urinary White Blood Cell Count	14	1.04 (0.80,1.34)	0.786	1.10 (0.91,1.34)	0.343
Current Thyroid Function	15	0.83 (0.54,1.28)	0.378	0.86 (0.64,1.15)	0.298
History of Thyroid Disease	15	1.13 (0.79,1.62)	0.508	1.03 (0.79,1.33)	0.833
Thyroid Gland	15	0.97 (0.82,1.14)	0.712	1.04 (0.92,1.17)	0.553
Testes	15	1.24 (0.87,1.75)	0.243	1.27 (0.97,1.66)	0.091
T ₃ % Uptake	15	0.76 (0.47,1.23)	0.240	0.80 (0.59,1.10)	0.158
TSH	15	1.23 (0.79,1.94)	0.373	1.05 (0.75,1.48)	0.765

TABLE Q-4. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	<u>Minimal Assumption</u>		<u>Maximal Assumption</u>	
		Est. Relative Risk (95% C.I.)	p-Value	Est. Relative Risk (95% C.I.)	p-Value
Testosterone	15	0.88 (0.54,1.43)	0.589	1.10 (0.78,1.56)	0.581
Fasting Glucose	15	1.25 (1.03,1.50)	0.022	1.29 (1.12,1.49)	<0.001
Composite Diabetes Indicator	15	1.27 (1.04,1.56)	0.023	1.33 (1.13,1.55)	<0.001
Composite Skin Tests Diagnosis	16	0.89 (0.63,1.27)	0.519	0.85 (0.66,1.10)	0.207
Asthma	17	0.91 (0.59,1.41)	0.678	0.89 (0.66,1.22)	0.473
Bronchitis	17	0.88 (0.70,1.11)	0.269	0.88 (0.75,1.04)	0.128
Pleurisy	17	1.29 (0.89,1.87)	0.190	1.19 (0.89,1.58)	0.253
Pneumonia	17	0.94 (0.71,1.25)	0.693	0.94 (0.77,1.15)	0.545
Tuberculosis	17	0.80 (0.49,1.32)	0.359	0.86 (0.61,1.22)	0.386
Thorax and Lung Abnormalities	17	1.09 (0.85,1.40)	0.510	1.17 (0.96,1.42)	0.131
Hyperresonance	17	1.04 (0.74,1.48)	0.808	1.13 (0.87,1.48)	0.359
Dullness	17	1.89 (0.76,4.75)	0.196	2.07 (0.90,4.74)	0.094
Wheezes	17	1.34 (0.93,1.93)	0.132	1.28 (0.95,1.71)	0.112
Rales	17	1.23 (0.73,2.09)	0.448	1.19 (0.78,1.81)	0.429
X-Ray Interpretation	17	1.04 (0.74,1.47)	0.823	1.03 (0.80,1.32)	0.844

--: Estimated relative risk, confidence interval, and p-value not given due to the sparse number of abnormalities.
Note: Estimated relative risk for a twofold increase in dioxin.

TABLE Q-5.
Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Self-Perception of Health	6	0.056	≤18.6 >18.6	0.64 (0.34,1.20) 1.22 (0.89,1.67)	0.166 0.213	0.314	≤18.6 >18.6	1.00 (0.68,1.48) 1.27 (0.99,1.63)	0.996 0.065
Appearance of Illness or Distress by Physician	6	0.203	≤18.6 >18.6	0.28 (0.01,10.02) 1.71 (0.68,4.30)	0.488 0.253	0.396	≤18.6 >18.6	0.88 (0.16,4.80) 1.88 (0.82,4.30)	0.880 0.138
Relative Age	6	0.039	≤18.6 >18.6	1.73 (1.06,2.81) 0.86 (0.53,1.38)	0.027 0.526	0.024	≤18.6 >18.6	1.50 (1.04,2.15) 0.85 (0.60,1.20)	0.028 0.349
Percent Body Fat	6	0.776	≤18.6 >18.6	1.18 (0.91,1.54) 1.24 (1.01,1.53)	0.217 0.045	0.320	≤18.6 >18.6	1.40 (1.15,1.70) 1.23 (1.04,1.45)	0.001 0.013
Sedimentation Rate	6	0.262	≤18.6 >18.6	0.78 (0.46,1.33) 1.10 (0.81,1.49)	0.360 0.548	0.228	≤18.6 >18.6	0.96 (0.67,1.39) 1.26 (0.99,1.60)	0.845 0.065
All Skin Neoplasms	7	0.646	≤18.6 >18.6	0.69 (0.48,1.01) 0.77 (0.58,1.03)	0.054 0.083	0.253	≤18.6 >18.6	0.80 (0.62,1.01) 0.96 (0.78,1.18)	0.062 0.671
Malignant Skin Neoplasms	7	0.528	≤18.6 >18.6	0.61 (0.37,0.99) 0.74 (0.50,1.12)	0.046 0.156	0.797	≤18.6 >18.6	0.83 (0.62,1.13) 0.88 (0.66,1.17)	0.241 0.386
Benign Skin Neoplasms (Non-Blacks Only)	7	0.985	≤18.6 >18.6	0.89 (0.52,1.51) 0.89 (0.62,1.28)	0.661 0.541	0.165	≤18.6 >18.6	0.80 (0.56,1.14) 1.09 (0.84,1.43)	0.220 0.516

TABLE Q-5. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Benign Skin Neoplasms (Blacks Included)	7	0.866	≤18.6 >18.6	0.85 (0.51,1.45) 0.90 (0.63,1.29)	0.559 0.573	0.154	≤18.6 >18.6	0.80 (0.55,1.14) 1.09 (0.84,1.43)	0.213 0.498
Skin Neoplasms of Uncertain Behavior or Unspecified Nature	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
<u>Basal Cell Carcinoma</u>	7	0.942	≤18.6 >18.6	0.71 (0.43,1.16) 0.69 (0.43,1.09)	0.167 0.110	0.999	≤18.6 >18.6	0.84 (0.61,1.16) 0.84 (0.62,1.16)	0.291 0.289
Ear, Face, Head, and Neck	7	0.282	≤18.6 >18.6	0.58 (0.29,1.17) 0.31 (0.13,0.76)	0.127 0.011	0.755	≤18.6 >18.6	0.74 (0.49,1.13) 0.67 (0.42,1.06)	0.159 0.087
Trunk	7	0.997	≤18.6 >18.6	0.88 (0.42,1.84) 0.88 (0.42,1.84)	0.730 0.729	0.906	≤18.6 >18.6	0.99 (0.60,1.64) 1.03 (0.60,1.79)	0.964 0.905
Upper Extremities	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- 0.25 (0.04,1.59)	-- 0.141
Lower Extremities	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Other Sites	7	--	≤18.6 >18.6	-- 1.29 (0.59,2.86)	-- 0.523	--	≤18.6 >18.6	-- 1.52 (0.77,2.98)	-- 0.224

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
<u>Sun Exposure-Related Malignant Skin Neoplasms</u>	7	0.694	≤18.6 >18.6	0.63 (0.38,1.03) 0.72 (0.47,1.10)	0.065 0.125	0.910	≤18.6 >18.6	0.84 (0.62,1.14) 0.86 (0.64,1.15)	0.253 0.305
Ear, Face, Head, and Neck	7	0.759	≤18.6 >18.6	0.54 (0.28,1.06) 0.47 (0.24,0.92)	0.075 0.029	0.941	≤18.6 >18.6	0.76 (0.51,1.12) 0.74 (0.49,1.11)	0.166 0.143
Trunk	7	0.872	≤18.6 >18.6	0.66 (0.31,1.40) 0.72 (0.33,1.54)	0.277 0.397	0.927	≤18.6 >18.6	0.92 (0.57,1.49) 0.95 (0.56,1.62)	0.738 0.858
Upper Extremities	7	--	≤18.6 >18.6	-- 1.05 (0.36,3.02)	-- 0.929	--	≤18.6 >18.6	-- 0.77 (0.35,1.72)	-- 0.528
Lower Extremities	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Other Sites	7	--	≤18.6 >18.6	-- 1.29 (0.59,2.86)	-- 0.523	--	≤18.6 >18.6	-- 1.52 (0.77,2.98)	-- 0.224
<u>Melanoma</u>	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- 0.36 (0.06,2.31)	-- 0.282
Ear, Face, Head, and Neck	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Trunk	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --

TABLE Q-5. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption				
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Upper Extremities	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Lower Extremities	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Other Sites	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Squamous Cell Carcinoma	7	--	≤18.6 >18.6	0.25 (0.02,3.48) --	0.303 --	--	≤18.6 >18.6	0.86 (0.26,2.86) --	0.804 --
<u>Basal Cell Carcinoma by Occupation</u>									
Officer-Ear, Face, Head, and Neck vs. None	7	0.787	≤18.6 >18.6	0.33 (0.00,39.39) 0.66 (0.08,5.86)	0.649 0.712	0.889	≤18.6 >18.6	1.27 (0.35,4.57) 1.43 (0.48,4.26)	0.719 0.524
Officer-Other Sites vs. None	7	--	≤18.6 >18.6	-- --	-- --	0.623	≤18.6 >18.6	0.31 (0.02,4.26) 0.67 (0.12,3.77)	0.380 0.648
Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7	--	≤18.6 >18.6	1.08 (0.34,3.42) --	0.891 --	--	≤18.6 >18.6	0.82 (0.36,1.85) --	0.630 --
Enlisted Flyer-Other Sites vs. None	7	0.011	≤18.6 >18.6	1.05 (0.26,4.25) 29.35 (1.23,702.4)	0.944 0.037	0.017	≤18.6 >18.6	1.49 (0.52,4.26) 29.37 (1.22,708.2)	0.457 0.037

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

	Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
			C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Q-35	Enlisted Groundcrew-Ear, Face, Head, and Neck vs. None	7	0.901	≤18.6	0.30 (0.09,1.01)	0.051	0.581	≤18.6	0.53 (0.26,1.09)	0.086
				>18.6	0.33 (0.11,0.98)	0.047		>18.6	0.70 (0.37,1.31)	0.265
	Enlisted Groundcrew-Other Sites vs. None	7	0.980	≤18.6	0.61 (0.24,1.58)	0.313	0.989	≤18.6	0.90 (0.44,1.82)	0.759
				>18.6	0.60 (0.17,2.17)	0.438		>18.6	0.90 (0.37,2.21)	0.823
<u>Sun Exposure-Related Malignant Skin Neoplasms by Occupation</u>										
	Officer-Ear, Face, Head, and Neck vs. None	7	0.698	≤18.6	0.25 (0.00,16.43)	0.514	0.886	≤18.6	1.45 (0.45,4.69)	0.538
				>18.6	0.61 (0.07,5.56)	0.662		>18.6	1.29 (0.45,3.67)	0.633
	Officer-Other Sites vs. None	7	--	≤18.6	--	--	0.861	≤18.6	0.56 (0.08,4.12)	0.568
				>18.6	0.58 (0.01,25.05)	0.777		>18.6	0.70 (0.15,3.31)	0.651
	Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7	--	≤18.6	0.98 (0.33,2.89)	0.972	--	≤18.6	0.86 (0.41,1.82)	0.696
				>18.6	--	--		>18.6	--	--
	Enlisted Flyer-Other Sites vs. None	7	0.010	≤18.6	1.04 (0.26,4.18)	0.955	0.017	≤18.6	1.48 (0.52,4.22)	0.459
				>18.6	29.36 (1.22,705.1)	0.037		>18.6	29.37 (1.22,709.9)	0.038

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log2 (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Enlisted Groundcrew- Ear, Face, Head, and Neck vs. None	7	0.430	≤18.6 >18.6	0.30 (0.09,1.01) 0.53 (0.24,1.16)	0.051 0.112	0.314	≤18.6 >18.6	0.53 (0.26,1.09) 0.84 (0.49,1.43)	0.086 0.523
Q36 Enlisted Groundcrew- Other Sites vs. None	7	0.986	≤18.6 >18.6	0.61 (0.24,1.58) 0.61 (0.17,2.19)	0.313 0.444	0.983	≤18.6 >18.6	0.90 (0.44,1.82) 0.91 (0.37,2.22)	0.759 0.830
Basal Cell Carcinoma (One vs. None)	7	0.926	≤18.6 >18.6	0.77 (0.45,1.33) 0.80 (0.48,1.33)	0.347 0.388	0.874	≤18.6 >18.6	0.90 (0.63,1.28) 0.86 (0.60,1.24)	0.544 0.419
Basal Cell Carcinoma (Multiple vs. None)	7	0.866	≤18.6 >18.6	0.50 (0.16,1.60) 0.44 (0.16,1.24)	0.247 0.121	0.731	≤18.6 >18.6	0.69 (0.35,1.36) 0.81 (0.45,1.45)	0.282 0.471
All Systemic Neoplasms	7	0.445	≤18.6 >18.6	0.97 (0.64,1.47) 1.18 (0.88,1.58)	0.868 0.277	0.860	≤18.6 >18.6	1.26 (0.93,1.70) 1.22 (0.96,1.53)	0.139 0.098
Malignant Systemic Neoplasms	7	0.908	≤18.6 >18.6	0.53 (0.19,1.52) 0.49 (0.18,1.31)	0.238 0.154	0.352	≤18.6 >18.6	1.06 (0.56,2.00) 0.70 (0.38,1.28)	0.858 0.247
Benign Systemic Neoplasms	7	0.583	≤18.6 >18.6	1.21 (0.76,1.93) 1.42 (1.03,1.96)	0.414 0.035	0.879	≤18.6 >18.6	1.35 (0.95,1.91) 1.39 (1.07,1.81)	0.095 0.013
Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	7	--	≤18.6 >18.6	-- 0.90 (0.28,2.90)	-- 0.865	--	≤18.6 >18.6	-- 1.19 (0.49,2.91)	-- 0.696

TABLE Q-5. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	C*T ^a	Minimal Assumption			Maximal Assumption				
			Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value		
Systemic Neoplasms:										
<u>Location/Site</u>										
Ear, Face, Head, and Neck	7	--	≤18.6 >18.6	-- --	-- --	-- --	≤18.6 >18.6	-- --		
Oral Cavity, Pharynx, and Larynx	7	--	≤18.6 >18.6	-- --	-- --	-- --	≤18.6 >18.6	-- --		
Brain	7	--	≤18.6 >18.6	-- --	-- --	-- --	≤18.6 >18.6	-- --		
Thymus and Mediastinum	7	--	≤18.6 >18.6	-- --	-- --	-- --	≤18.6 >18.6	-- --		
Thyroid Gland	7	--	≤18.6 >18.6	-- --	-- --	-- --	≤18.6 >18.6	-- --		
Bronchus and Lung	7	--	≤18.6 >18.6	-- --	-- --	-- --	≤18.6 >18.6	-- --		
Colon and Rectum	7	--	≤18.6 >18.6	-- --	-- --	-- --	≤18.6 >18.6	-- --		
Kidney and Bladder	7	--	≤18.6 >18.6	0.45 (0.10,1.94)	0.281	--	≤18.6 >18.6	0.67 (0.27,1.62) 0.372		

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Prostate	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Testicles	7	--	≤18.6 >18.6	0.63 (0.12,3.29)	0.581	--	≤18.6 >18.6	1.13 (0.39,3.28)	0.828
Q-38 Ill-Defined Sites	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Carcinoma in Situ of Penis	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Carcinoma in Situ of Other and Unspecified Sites	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Hodgkin's Disease	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Leukemia	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Other Malignant Neoplasms of Lymphoid and Histiocytic Tissue	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	0.46 (0.09,2.26)	0.338

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	C*T ^a	Minimal Assumption			C*T ^a	Time (Yrs.)	Maximal Assumption	
			Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value			Time (Yrs.)	Est. Relative Risk (95% C.I.)
All Skin and Systemic Neoplasms	7	0.414	≤18.6 >18.6	0.82 (0.61,1.10) 0.96 (0.77,1.20)	0.187 0.703	0.355	≤18.6 >18.6	0.95 (0.78,1.16) 1.08 (0.91,1.28)	0.618 0.402
Inflammatory Diseases	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Hereditary and Degenerative Diseases	8	0.482	≤18.6 >18.6	0.81 (0.45,1.48) 1.07 (0.66,1.73)	0.495 0.790	0.936	≤18.6 >18.6	0.98 (0.65,1.47) 1.00 (0.69,1.45)	0.907 0.991
Periperal Disorders	8	0.184	≤18.6 >18.6	0.82 (0.57,1.19) 1.11 (0.86,1.44)	0.302 0.418	0.255	≤18.6 >18.6	0.89 (0.70,1.14) 1.07 (0.88,1.31)	0.371 0.488
Disorders of the Eye	8	0.920	≤18.6 >18.6	1.05 (0.79,1.41) 1.08 (0.84,1.38)	0.720 0.563	0.832	≤18.6 >18.6	1.06 (0.87,1.31) 1.10 (0.90,1.33)	0.557 0.346
Tympanic Membrane Disorder	8	0.435	≤18.6 >18.6	1.07 (0.58,1.97) 0.80 (0.54,1.19)	0.821 0.270	0.844	≤18.6 >18.6	0.98 (0.63,1.51) 0.93 (0.69,1.24)	0.922 0.616
Otitis	8	0.791	≤18.6 >18.6	0.86 (0.49,1.51) 0.94 (0.71,1.23)	0.601 0.642	0.032	≤18.6 >18.6	0.62 (0.42,0.90) 0.97 (0.79,1.19)	0.012 0.760
Hearing Loss	8	0.555	≤18.6 >18.6	0.84 (0.66,1.08) 0.93 (0.75,1.15)	0.182 0.517	0.674	≤18.6 >18.6	0.91 (0.77,1.09) 0.87 (0.74,1.02)	0.319 0.095
Other Neurological Disorders	8	0.619	≤18.6 >18.6	1.11 (0.85,1.46) 1.02 (0.82,1.26)	0.437 0.858	0.114	≤18.6 >18.6	1.37 (1.12,1.68) 1.11 (0.94,1.31)	0.002 0.204

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TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Smell	8	--	≤18.6 >18.6	0.50 (0.11,2.31) --	0.375 --	--	≤18.6 >18.6	0.86 (0.36,2.03) --	0.727 --
Visual Fields	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Light Reaction	8	--	≤18.6 >18.6	0.95 (0.25,3.64) --	0.943 --	0.432	≤18.6 >18.6	0.83 (0.34,1.99) 1.35 (0.57,3.17)	0.671 0.494
Ocular Movement	8	--	≤18.6 >18.6	-- 0.82 (0.20,3.41)	-- 0.783	--	≤18.6 >18.6	-- 0.88 (0.31,2.52)	-- 0.818
Facial Sensation	8	--	≤18.6 >18.6	1.55 (0.49,4.88) --	0.454 --	--	≤18.6 >18.6	1.88 (0.71,4.97) --	0.203 --
Smile	8	--	≤18.6 >18.6	-- 2.53 (0.96,6.66)	-- 0.059	--	≤18.6 >18.6	-- 1.15 (0.60,2.19)	-- 0.668
Palpebral Fissure	8	0.552	≤18.6 >18.6	0.79 (0.18,3.43) 1.25 (0.70,2.23)	0.758 0.451	0.228	≤18.6 >18.6	0.67 (0.25,1.81) 1.26 (0.78,2.02)	0.427 0.347
Balance	8	--	≤18.6 >18.6	-- 0.92 (0.18,4.70)	-- 0.921	--	≤18.6 >18.6	-- 1.21 (0.34,4.24)	-- 0.770
Speech	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	C*T ^a	Minimal Assumption			Maximal Assumption			
			Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Neck Range of Motion	8	0.110	≤18.6 >18.6	0.74 (0.47,1.18) 1.14 (0.86,1.52)	0.207 0.359	0.024	≤18.6 >18.6	0.71 (0.52,0.96) 1.08 (0.86,1.34)	0.024 0.516
Cranial Nerve Index	8	0.114	≤18.6 >18.6	0.76 (0.51,1.14) 1.11 (0.86,1.43)	0.186 0.424	0.021	≤18.6 >18.6	0.74 (0.57,0.97) 1.09 (0.89,1.32)	0.027 0.411
Cranial Nerve Index Without Range of Motion	8	0.620	≤18.6 >18.6	0.89 (0.46,1.72) 1.08 (0.72,1.63)	0.725 0.716	0.509	≤18.6 >18.6	0.93 (0.59,1.46) 1.12 (0.81,1.55)	0.750 0.499
Pin Prick	8	0.123	≤18.6 >18.6	0.80 (0.50,1.29) 1.28 (0.88,1.87)	0.363 0.194	0.971	≤18.6 >18.6	1.06 (0.77,1.45) 1.06 (0.80,1.42)	0.743 0.676
Light Touch	8	0.023	≤18.6 >18.6	0.59 (0.30,1.17) 1.43 (0.92,2.22)	0.129 0.111	0.401	≤18.6 >18.6	0.89 (0.59,1.35) 1.12 (0.80,1.56)	0.583 0.517
Muscle Status	8	0.869	≤18.6 >18.6	1.07 (0.51,2.25) 0.98 (0.44,2.15)	0.859 0.953	0.629	≤18.6 >18.6	1.30 (0.75,2.25) 1.07 (0.59,1.94)	0.348 0.835
Vibration	8	0.847	≤18.6 >18.6	0.87 (0.28,2.72) 0.76 (0.38,1.53)	0.806 0.438	0.885	≤18.6 >18.6	1.06 (0.49,2.30) 0.99 (0.61,1.63)	0.879 0.974
Patellar Reflex	8	0.820	≤18.6 >18.6	1.16 (0.48,2.80) 1.02 (0.54,1.93)	0.740 0.945	0.786	≤18.6 >18.6	1.27 (0.66,2.44) 1.13 (0.69,1.86)	0.470 0.615
Achilles Reflex	8	0.049	≤18.6 >18.6	0.59 (0.31,1.10) 1.17 (0.82,1.69)	0.098 0.387	0.305	≤18.6 >18.6	0.97 (0.65,1.43) 1.24 (0.93,1.66)	0.861 0.143

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Biceps Reflex	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Babinski Reflex	8	--	≤18.6 >18.6	-- 0.96 (0.20,4.72)	-- 0.964	--	≤18.6 >18.6	-- 1.24 (0.36,4.30)	-- 0.734
Tremor	8	0.402	≤18.6 >18.6	1.41 (0.71,2.79) 0.95 (0.52,1.75)	0.326 0.877	0.101	≤18.6 >18.6	1.56 (0.92,2.65) 0.87 (0.55,1.37)	0.102 0.548
Coordination	8	0.312	≤18.6 >18.6	1.69 (0.75,3.79) 0.94 (0.42,2.11)	0.206 0.885	0.128	≤18.6 >18.6	2.00 (1.00,4.03) 0.99 (0.53,1.84)	0.051 0.962
Romberg Sign	8	--	≤18.6 >18.6	-- 0.92 (0.18,4.70)	-- 0.921	--	≤18.6 >18.6	-- 1.21 (0.34,4.24)	-- 0.770
Gait	8	0.880	≤18.6 >18.6	1.18 (0.49,2.84) 1.10 (0.69,1.73)	0.705 0.692	0.824	≤18.6 >18.6	1.08 (0.58,2.04) 1.17 (0.82,1.68)	0.806 0.382
CNS Index	8	0.383	≤18.6 >18.6	1.43 (0.87,2.34) 1.08 (0.74,1.57)	0.159 0.686	0.256	≤18.6 >18.6	1.44 (0.99,2.10) 1.09 (0.82,1.46)	0.056 0.541
Psychoses	9	0.351	≤18.6 >18.6	0.81 (0.41,1.62) 0.42 (0.11,1.57)	0.552 0.197	0.361	≤18.6 >18.6	1.27 (0.78,2.08) 0.85 (0.40,1.81)	0.334 0.669
Alcohol Dependence	9	0.393	≤18.6 >18.6	1.14 (0.73,1.78) 0.89 (0.62,1.27)	0.551 0.529	0.163	≤18.6 >18.6	1.27 (0.92,1.77) 0.94 (0.73,1.22)	0.151 0.657

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TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption				
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Drug Dependence	9	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Anxiety	9	0.700	≤18.6 >18.6	1.14 (0.85,1.52) 1.23 (0.95,1.58)	0.381 0.111	0.418	≤18.6 >18.6	1.26 (1.02,1.55) 1.12 (0.92,1.35)	0.034 0.263
Other Neuroses	9	0.294	≤18.6 >18.6	1.20 (0.95,1.51) 1.02 (0.84,1.23)	0.136 0.874	0.082	≤18.6 >18.6	1.30 (1.09,1.53) 1.06 (0.92,1.23)	0.003 0.420
Trouble Falling Asleep	9	0.683	≤18.6 >18.6	0.94 (0.64,1.37) 1.05 (0.74,1.48)	0.747 0.802	0.537	≤18.6 >18.6	1.10 (0.84,1.44) 0.98 (0.75,1.27)	0.488 0.863
Waking Up During the Night	9	0.772	≤18.6 >18.6	0.97 (0.70,1.34) 0.91 (0.67,1.22)	0.838 0.517	0.356	≤18.6 >18.6	1.04 (0.83,1.31) 0.89 (0.71,1.12)	0.745 0.325
Waking Up Too Early and Can't Go Back to Sleep	9	0.286	≤18.6 >18.6	1.07 (0.75,1.53) 0.82 (0.58,1.15)	0.705 0.252	0.566	≤18.6 >18.6	1.09 (0.85,1.40) 0.98 (0.77,1.26)	0.509 0.884
Waking Up Unrefreshed	9	0.509	≤18.6 >18.6	0.99 (0.66,1.48) 1.16 (0.89,1.52)	0.950 0.272	0.361	≤18.6 >18.6	1.07 (0.81,1.43) 1.27 (1.02,1.57)	0.620 0.030
Involuntarily Falling Asleep During the Day	9	0.135	≤18.6 >18.6	1.13 (0.67,1.91) 0.61 (0.33,1.16)	0.638 0.132	0.075	≤18.6 >18.6	1.28 (0.88,1.88) 0.77 (0.51,1.18)	0.201 0.229

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TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Great or Disabling Fatigue During the Day	9	0.943	≤18.6 >18.6	0.88 (0.50,1.53) 0.90 (0.56,1.46)	0.644 0.671	0.386	≤18.6 >18.6	1.25 (0.84,1.87) 0.99 (0.69,1.42)	0.265 0.948
Frightening Dreams	9	0.744	≤18.6 >18.6	1.35 (0.87,2.09) 1.21 (0.77,1.92)	0.179 0.406	0.379	≤18.6 >18.6	1.56 (1.11,2.19) 1.24 (0.86,1.79)	0.011 0.241
Talking in Sleep	9	0.728	≤18.6 >18.6	1.27 (0.82,1.98) 1.14 (0.74,1.75)	0.286 0.550	0.768	≤18.6 >18.6	1.31 (0.94,1.83) 1.22 (0.86,1.71)	0.115 0.260
Sleepwalking	9	0.166	≤18.6 >18.6	0.83 (0.42,1.64) 1.55 (0.85,2.82)	0.582 0.151	0.990	≤18.6 >18.6	1.14 (0.70,1.85) 1.14 (0.72,1.80)	0.592 0.581
Abnormal Movement/Activity During the Night	9	0.706	≤18.6 >18.6	1.19 (0.72,1.95) 1.04 (0.64,1.69)	0.500 0.883	0.910	≤18.6 >18.6	1.27 (0.87,1.84) 1.31 (0.88,1.94)	0.210 0.178
Sleep Problems Requiring Medication	9	0.655	≤18.6 >18.6	0.42 (0.10,1.80) 0.61 (0.26,1.44)	0.244 0.261	0.939	≤18.6 >18.6	0.72 (0.33,1.56) 0.69 (0.39,1.24)	0.403 0.213
Snore Loudly in All Sleeping Positions	9	0.665	≤18.6 >18.6	0.96 (0.61,1.52) 0.85 (0.61,1.17)	0.866 0.320	0.891	≤18.6 >18.6	1.10 (0.80,1.52) 1.07 (0.84,1.36)	0.557 0.575
Insomnia	9	0.402	≤18.6 >18.6	1.02 (0.78,1.33) 0.87 (0.68,1.12)	0.883 0.283	0.077	≤18.6 >18.6	1.11 (0.92,1.34) 0.88 (0.73,1.05)	0.283 0.156
Overall Sleep Disorder Index	9	0.336	≤18.6 >18.6	1.05 (0.82,1.33) 0.90 (0.73,1.10)	0.717 0.290	0.160	≤18.6 >18.6	1.13 (0.95,1.34) 0.96 (0.82,1.12)	0.162 0.586

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
SCL-90-R									
Anxiety	9	0.183	≤18.6 >18.6	1.01 (0.66,1.54) 1.45 (1.03,2.05)	0.959 0.031	0.868	≤18.6 >18.6	1.26 (0.92,1.72) 1.30 (0.99,1.71)	0.153 0.057
Depression	9	0.222	≤18.6 >18.6	1.09 (0.74,1.59) 1.48 (1.07,2.04)	0.688 0.017	0.961	≤18.6 >18.6	1.27 (0.95,1.69) 1.26 (0.98,1.62)	0.101 0.075
Hostility	9	0.988	≤18.6 >18.6	1.12 (0.66,1.89) 1.11 (0.73,1.69)	0.685 0.630	0.543	≤18.6 >18.6	1.33 (0.90,1.98) 1.14 (0.82,1.58)	0.152 0.450
Interpersonal Sensitivity	9	0.482	≤18.6 >18.6	1.43 (0.96,2.14) 1.16 (0.75,1.78)	0.082 0.499	0.315	≤18.6 >18.6	1.46 (1.07,1.99) 1.15 (0.82,1.62)	0.018 0.415
Obsessive-Compulsive Behavior	9	0.283	≤18.6 >18.6	1.07 (0.72,1.61) 1.42 (1.03,1.96)	0.730 0.031	0.999	≤18.6 >18.6	1.37 (1.01,1.87) 1.37 (1.06,1.78)	0.043 0.018
Paranoid Ideation	9	0.474	≤18.6 >18.6	0.96 (0.57,1.61) 0.68 (0.31,1.51)	0.865 0.344	0.206	≤18.6 >18.6	1.12 (0.77,1.64) 0.74 (0.42,1.28)	0.561 0.277
Phobic Anxiety	9	0.222	≤18.6 >18.6	0.89 (0.56,1.42) 1.28 (0.89,1.82)	0.628 0.178	0.764	≤18.6 >18.6	1.23 (0.88,1.71) 1.15 (0.87,1.52)	0.232 0.337
Psychoticism	9	0.661	≤18.6 >18.6	1.10 (0.73,1.66) 1.23 (0.91,1.67)	0.655 0.182	0.756	≤18.6 >18.6	1.27 (0.94,1.73) 1.20 (0.94,1.53)	0.122 0.147
Somatization	9	0.015	≤18.6 >18.6	0.70 (0.45,1.09) 1.33 (0.99,1.79)	0.116 0.061	0.620	≤18.6 >18.6	1.09 (0.81,1.47) 1.20 (0.95,1.52)	0.554 0.122

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Global Severity Index	9	0.301	≤18.6 >18.6	1.11 (0.75,1.63) 1.44 (1.04,1.98)	0.609 0.026	0.893	≤18.6 >18.6	1.31 (0.98,1.75) 1.28 (0.99,1.64)	0.069 0.061
Positive Symptom Total	9	0.944	≤18.6 >18.6	1.29 (0.87,1.89) 1.31 (0.93,1.85)	0.201 0.125	0.447	≤18.6 >18.6	1.36 (1.01,1.82) 1.16 (0.88,1.53)	0.041 0.282
Positive Symptom Distress Index	9	0.643	≤18.6 >18.6	0.95 (0.65,1.39) 1.07 (0.77,1.48)	0.787 0.691	0.783	≤18.6 >18.6	1.16 (0.88,1.52) 1.10 (0.85,1.41)	0.291 0.465
Viral Hepatitis	10	0.588	≤18.6 >18.6	1.04 (0.82,1.33) 0.96 (0.79,1.16)	0.722 0.672	0.296	≤18.6 >18.6	1.14 (0.96,1.35) 1.01 (0.87,1.17)	0.131 0.879
Chronic Liver Disease and Cirrhosis (Alcohol-Related)	10	0.317	≤18.6 >18.6	1.10 (0.60,2.02) 0.74 (0.45,1.22)	0.747 0.236	0.463	≤18.6 >18.6	1.01 (0.65,1.55) 0.82 (0.57,1.16)	0.977 0.259
Chronic Liver Disease and Cirrhosis (Nonalcohol-Related)	10	--	≤18.6 >18.6	0.67 (0.18,2.48) --	0.553 --	--	≤18.6 >18.6	0.90 (0.39,2.09) --	0.807 --
Other Disorders of the Liver	10	0.535	≤18.6 >18.6	1.22 (0.81,1.85) 1.04 (0.79,1.39)	0.338 0.768	0.408	≤18.6 >18.6	1.26 (0.93,1.70) 1.07 (0.86,1.33)	0.143 0.531
Jaundice (Unspecified)	10	0.344	≤18.6 >18.6	0.92 (0.23,3.59) 2.21 (0.60,8.15)	0.899 0.235	0.426	≤18.6 >18.6	1.03 (0.42,2.56) 0.62 (0.27,1.42)	0.947 0.260

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Hepatomegaly	10	0.921	≤18.6 >18.6	0.93 (0.47,1.84) 0.98 (0.48,1.98)	0.830 0.944	0.363	≤18.6 >18.6	1.37 (0.82,2.22) 0.98 (0.57,1.66)	0.266 0.928
Ulcer	10	0.885	≤18.6 >18.6	1.10 (0.67,1.83) 1.05 (0.74,1.50)	0.703 0.768	0.845	≤18.6 >18.6	1.14 (0.80,1.63) 1.09 (0.83,1.44)	0.460 0.525
Skin Bruises, Patches, or Sensitivity	10	0.657	≤18.6 >18.6	1.06 (0.82,1.36) 0.98 (0.80,1.21)	0.659 0.869	0.800	≤18.6 >18.6	1.08 (0.90,1.29) 1.05 (0.89,1.23)	0.396 0.572
Current Hepatomegaly	10	0.986	≤18.6 >18.6	0.99 (0.46,2.12) 0.98 (0.39,2.43)	0.973 0.959	0.800	≤18.6 >18.6	1.41 (0.79,2.52) 1.25 (0.61,2.57)	0.244 0.537
AST	10	0.467	≤18.6 >18.6	0.80 (0.40,1.59) 1.06 (0.72,1.57)	0.520 0.760	0.800	≤18.6 >18.6	0.96 (0.61,1.51) 1.03 (0.77,1.37)	0.853 0.858
ALT	10	0.267	≤18.6 >18.6	1.33 (0.96,1.84) 1.05 (0.80,1.37)	0.082 0.729	0.338	≤18.6 >18.6	1.30 (1.03,1.66) 1.12 (0.91,1.37)	0.028 0.285
GGT	10	0.728	≤18.6 >18.6	1.11 (0.75,1.65) 1.02 (0.75,1.38)	0.599 0.908	0.522	≤18.6 >18.6	1.27 (0.95,1.71) 1.13 (0.89,1.42)	0.108 0.320
Alkaline Phosphatase	10	0.377	≤18.6 >18.6	0.91 (0.48,1.75) 1.27 (0.88,1.83)	0.787 0.200	0.281	≤18.6 >18.6	1.01 (0.65,1.58) 1.35 (1.01,1.83)	0.952 0.046
D-Glucaric Acid	10	--	≤18.6 >18.6	-- --	-- --	0.394	≤18.6 >18.6	0.93 (0.29,3.00) 0.39 (0.07,2.27)	0.899 0.292

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Total Bilirubin	10	0.517	≤18.6 >18.6	0.55 (0.21,1.43) 0.34 (0.12,0.98)	0.221 0.045	0.820	≤18.6 >18.6	0.64 (0.35,1.16) 0.70 (0.41,1.21)	0.141 0.204
Direct Bilirubin	10	0.961	≤18.6 >18.6	0.67 (0.34,1.33) 0.69 (0.37,1.27)	0.255 0.233	0.893	≤18.6 >18.6	0.93 (0.59,1.45) 0.89 (0.58,1.37)	0.748 0.595
LDH	10	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	0.27 (0.05,1.38) --	0.116 --
Cholesterol	10	0.388	≤18.6 >18.6	0.83 (0.58,1.19) 1.01 (0.77,1.34)	0.309 0.924	0.837	≤18.6 >18.6	0.91 (0.71,1.15) 0.94 (0.76,1.16)	0.427 0.556
HDL	10	0.705	≤18.6 >18.6	1.24 (0.64,2.38) 1.06 (0.68,1.66)	0.519 0.787	0.587	≤18.6 >18.6	0.99 (0.62,1.59) 1.17 (0.82,1.65)	0.982 0.382
Cholesterol-HDL Ratio	10	0.113	≤18.6 >18.6	0.96 (0.76,1.22) 1.23 (1.01,1.50)	0.741 0.039	0.399	≤18.6 >18.6	1.12 (0.95,1.33) 1.24 (1.07,1.44)	0.168 0.005
Triglycerides	10	0.948	≤18.6 >18.6	1.32 (0.89,1.95) 1.30 (0.96,1.76)	0.162 0.094	0.814	≤18.6 >18.6	1.35 (1.01,1.80) 1.29 (1.01,1.64)	0.045 0.044
Creatine Kinase	10	0.065	≤18.6 >18.6	0.49 (0.24,1.01) 1.05 (0.67,1.64)	0.053 0.836	0.413	≤18.6 >18.6	0.77 (0.51,1.16) 0.96 (0.68,1.35)	0.210 0.813
Occurrence of Acne (Lifetime)	11	0.115	≤18.6 >18.6	1.16 (0.91,1.47) 0.90 (0.75,1.10)	0.236 0.306	0.006	≤18.6 >18.6	1.21 (1.02,1.44) 0.89 (0.77,1.03)	0.025 0.110

TABLE Q-5. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	C*T ^a	Minimal Assumption			C*T ^a	Time (Yrs.)	Maximal Assumption		
			Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value			Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Q 6	Acne Relative to SEA Tour (Pre/Post-SEA and Post-SEA vs. Pre-SEA and None)	11	0.062	≤18.6 >18.6	1.21 (0.95,1.55) 0.91 (0.75,1.10)	0.116 0.318	0.001	≤18.6 >18.6	1.27 (1.07,1.51) 0.89 (0.77,1.03)	0.005 0.108
	Acne Relative to SEA Tour (Post-SEA vs. None)	11	0.101	≤18.6 >18.6	1.13 (0.88,1.47) 0.86 (0.70,1.06)	0.340 0.157	0.006	≤18.6 >18.6	1.19 (0.99,1.42) 0.85 (0.73,1.00)	0.058 0.045
	Acne Relative to SEA Tour (Pre/Post-SEA vs. Pre-SEA)	11	0.184	≤18.6 >18.6	4.81 (0.74,31.46) 1.30 (0.49,3.40)	0.101 0.598	0.072	≤18.6 >18.6	3.56 (1.21,10.43) 1.15 (0.56,2.37)	0.021 0.701
	Location of Acne (Post-SEA)	11	0.021	≤18.6 >18.6	0.71 (0.43,1.17) 1.42 (1.00,2.03)	0.177 0.051	0.083	≤18.6 >18.6	0.76 (0.54,1.07) 1.11 (0.85,1.44)	0.113 0.458
	Location of Acne (Pre/Post-SEA and Post-SEA)	11	0.037	≤18.6 >18.6	0.84 (0.57,1.24) 1.42 (1.03,1.94)	0.386 0.030	0.141	≤18.6 >18.6	0.84 (0.63,1.11) 1.10 (0.87,1.38)	0.213 0.433
	Comedones	11	0.708	≤18.6 >18.6	1.04 (0.79,1.39) 1.12 (0.89,1.41)	0.761 0.335	0.939	≤18.6 >18.6	1.06 (0.86,1.29) 1.04 (0.87,1.25)	0.595 0.632
	Acneiform Lesions	11	0.507	≤18.6 >18.6	1.06 (0.74,1.51) 0.90 (0.65,1.25)	0.752 0.527	0.110	≤18.6 >18.6	1.39 (1.06,1.81) 1.03 (0.81,1.32)	0.016 0.792
	Acneiform Scars	11	0.100	≤18.6 >18.6	1.54 (1.12,2.12) 1.07 (0.79,1.44)	0.009 0.666	0.030	≤18.6 >18.6	1.46 (1.15,1.85) 1.02 (0.81,1.28)	0.002 0.888

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption				
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Depigmentation	11	0.381	≤18.6 >18.6	1.05 (0.68,1.62) 0.81 (0.53,1.22)	0.813 0.308	0.087	≤18.6 >18.6	1.30 (0.94,1.79) 0.89 (0.66,1.19)	0.110 0.433
Inclusion Cysts	11	0.305	≤18.6 >18.6	0.78 (0.50,1.21) 1.03 (0.75,1.42)	0.270 0.840	0.923	≤18.6 >18.6	0.82 (0.61,1.10) 0.84 (0.65,1.07)	0.179 0.147
Hyperpigmentation	11	0.961	≤18.6 >18.6	1.14 (0.85,1.53) 1.15 (0.89,1.48)	0.390 0.286	0.305	≤18.6 >18.6	1.35 (1.09,1.68) 1.16 (0.95,1.41)	0.007 0.145
Other Abnormalities	11	0.928	≤18.6 >18.6	0.88 (0.69,1.14) 0.87 (0.70,1.08)	0.338 0.199	0.821	≤18.6 >18.6	0.87 (0.73,1.05) 0.85 (0.72,1.00)	0.141 0.052
Dermatology Index	11	0.431	≤18.6 >18.6	1.17 (0.92,1.48) 1.03 (0.85,1.25)	0.202 0.763	0.048	≤18.6 >18.6	1.20 (1.02,1.42) 0.96 (0.83,1.11)	0.031 0.590
Reported/Verified Essential Hypertension	12	0.288	≤18.6 >18.6	1.20 (0.92,1.56) 1.00 (0.80,1.25)	0.171 0.979	0.530	≤18.6 >18.6	1.14 (0.95,1.37) 1.05 (0.89,1.25)	0.153 0.532
Reported Heart Disease (Excluding Essential Hypertension)	12	0.926	≤18.6 >18.6	0.86 (0.65,1.14) 0.88 (0.70,1.10)	0.297 0.261	0.779	≤18.6 >18.6	0.84 (0.69,1.01) 0.81 (0.68,0.96)	0.065 0.015
Verified Heart Disease (Excluding Essential Hypertension)	12	0.944	≤18.6 >18.6	0.86 (0.65,1.14) 0.87 (0.69,1.10)	0.297 0.250	0.740	≤18.6 >18.6	0.84 (0.69,1.01) 0.80 (0.68,0.95)	0.065 0.013

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Reported/Verified Myocardial Infarction	12	0.862	≤18.6 >18.6	0.90 (0.48,1.70) 0.84 (0.51,1.39)	0.746 0.491	0.332	≤18.6 >18.6	1.25 (0.80,1.96) 0.94 (0.65,1.35)	0.329 0.731
Systolic Blood Pressure	12	0.675	≤18.6 >18.6	1.00 (0.72,1.38) 0.91 (0.70,1.19)	0.997 0.505	0.647	≤18.6 >18.6	1.08 (0.86,1.35) 1.00 (0.82,1.22)	0.528 0.979
Heart Sounds	12	0.688	≤18.6 >18.6	0.76 (0.34,1.73) 0.93 (0.56,1.53)	0.515 0.761	0.159	≤18.6 >18.6	0.73 (0.43,1.24) 1.16 (0.79,1.69)	0.249 0.456
Overall ECG	12	0.213	≤18.6 >18.6	1.06 (0.74,1.50) 0.78 (0.58,1.06)	0.764 0.117	0.375	≤18.6 >18.6	1.03 (0.81,1.31) 0.89 (0.71,1.10)	0.821 0.281
ECG: RBBB	12	--	≤18.6 >18.6	-- 1.00 (0.31,3.20)	-- 0.996	--	≤18.6 >18.6	-- 1.29 (0.51,3.25)	-- 0.595
ECG: LBBB	12	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
ECG: Nonspecific T-Waves	12	0.587	≤18.6 >18.6	0.92 (0.58,1.45) 0.79 (0.57,1.09)	0.721 0.153	0.848	≤18.6 >18.6	1.02 (0.75,1.39) 0.98 (0.78,1.25)	0.893 0.889
ECG: Bradycardia	12	0.363	≤18.6 >18.6	1.03 (0.58,1.83) 0.56 (0.15,2.05)	0.930 0.379	0.067	≤18.6 >18.6	1.02 (0.69,1.52) 0.46 (0.20,1.08)	0.905 0.076
ECG: Arrhythmia	12	0.339	≤18.6 >18.6	1.55 (0.85,2.83) 1.05 (0.61,1.81)	0.149 0.867	0.032	≤18.6 >18.6	1.51 (0.96,2.37) 0.78 (0.51,1.17)	0.074 0.230

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
ECG: Other Diagnoses	12	0.129	≤18.6 >18.6	1.01 (0.73,1.41) 0.70 (0.49,1.00)	0.942 0.048	0.040	≤18.6 >18.6	1.03 (0.82,1.29) 0.72 (0.56,0.93)	0.814 0.011
Diastolic Blood Pressure	12	0.963	≤18.6 >18.6	0.94 (0.50,1.75) 0.95 (0.61,1.49)	0.835 0.832	0.547	≤18.6 >18.6	0.95 (0.62,1.47) 1.13 (0.80,1.58)	0.829 0.488
Funduscopic Examination	12	--	≤18.6 >18.6	1.58 (0.49,5.06) --	0.458 --	--	≤18.6 >18.6	1.13 (0.53,2.43) --	0.749 --
Carotid Bruits	12	--	≤18.6 >18.6	-- 0.48 (0.12,2.00)	-- 0.315	--	≤18.6 >18.6	-- 0.60 (0.25,1.41)	-- 0.240
Radial Pulses	12	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Femoral Pulses	12	0.562	≤18.6 >18.6	0.96 (0.32,2.93) 0.64 (0.29,1.42)	0.950 0.271	0.656	≤18.6 >18.6	1.05 (0.48,2.30) 0.84 (0.50,1.43)	0.906 0.527
Popliteal Pulses	12	0.762	≤18.6 >18.6	0.50 (0.17,1.49) 0.61 (0.29,1.25)	0.211 0.178	0.881	≤18.6 >18.6	0.91 (0.48,1.72) 0.86 (0.53,1.38)	0.776 0.525
Dorsalis Pedis Pulses	12	0.273	≤18.6 >18.6	1.27 (0.87,1.85) 0.97 (0.70,1.33)	0.208 0.832	0.497	≤18.6 >18.6	1.21 (0.93,1.58) 1.07 (0.85,1.36)	0.155 0.569
Posterior Tibial Pulses	12	0.756	≤18.6 >18.6	0.60 (0.24,1.50) 0.71 (0.39,1.30)	0.273 0.263	0.733	≤18.6 >18.6	1.15 (0.65,2.04) 1.01 (0.67,1.54)	0.636 0.946

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TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	C*T ^a	Minimal Assumption			Maximal Assumption		
			Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)
Leg Pulses	12	0.369	≤18.6 >18.6	1.13 (0.79,1.61) 0.91 (0.68,1.22)	0.513 0.533	0.609	≤18.6 >18.6	1.16 (0.91,1.50) 1.07 (0.86,1.32)
Peripheral/All Pulses	12	0.321	≤18.6 >18.6	1.13 (0.79,1.61) 0.89 (0.67,1.19)	0.513 0.439	0.577	≤18.6 >18.6	1.16 (0.91,1.50) 1.06 (0.86,1.31)
Red Blood Cell Count	13	0.066	≤18.6 >18.6	0.29 (0.04,2.22) 1.32 (0.84,2.06)	0.232 0.229	0.012	≤18.6 >18.6	0.47 (0.19,1.19) 1.42 (0.98,2.06)
Hematocrit	13	0.330	≤18.6 >18.6	0.15 (0.00,17.41) 0.87 (0.48,1.58)	0.431 0.643	0.277	≤18.6 >18.6	0.46 (0.08,2.63) 1.09 (0.70,1.69)
Mean Corpuscular Volume	13	0.999	≤18.6 >18.6	0.99 (0.69,1.42) 0.99 (0.75,1.32)	0.960 0.965	0.808	≤18.6 >18.6	1.15 (0.89,1.49) 1.10 (0.89,1.37)
Mean Corpuscular Hemoglobin	13	0.127	≤18.6 >18.6	1.41 (0.92,2.15) 0.92 (0.66,1.29)	0.112 0.645	0.301	≤18.6 >18.6	1.24 (0.91,1.68) 1.00 (0.78,1.29)
Platelet Count	13	0.551	≤18.6 >18.6	0.90 (0.38,2.17) 1.22 (0.75,1.97)	0.820 0.428	0.930	≤18.6 >18.6	1.19 (0.65,2.19) 1.23 (0.84,1.80)
Prothrombin Time	13	0.300	≤18.6 >18.6	1.48 (0.71,3.10) 0.91 (0.52,1.57)	0.299 0.724	0.889	≤18.6 >18.6	1.01 (0.60,1.73) 0.97 (0.64,1.46)
Kidney Disease	14	0.375	≤18.6 >18.6	0.89 (0.60,1.33) 1.12 (0.82,1.53)	0.572 0.479	0.910	≤18.6 >18.6	1.01 (0.77,1.32) 1.03 (0.81,1.31)

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	C*T ^a	Minimal Assumption			Maximal Assumption		
			Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)
Urinary Protein	14	0.174	≤18.6 >18.6	0.81 (0.47,1.39) 1.32 (0.83,2.12)	0.440 0.245	0.625	≤18.6 >18.6	1.09 (0.75,1.58) 0.96 (0.67,1.37)
Urinary Occult Blood	14	0.547	≤18.6 >18.6	1.23 (0.77,1.94) 1.04 (0.77,1.39)	0.385 0.819	0.482	≤18.6 >18.6	1.07 (0.77,1.48) 1.23 (0.97,1.55)
Urinary White Blood Cell Count	14	0.323	≤18.6 >18.6	0.92 (0.60,1.39) 1.20 (0.85,1.69)	0.680 0.295	0.326	≤18.6 >18.6	1.04 (0.78,1.40) 1.27 (0.97,1.68)
Current Thyroid Function	15	0.437	≤18.6 >18.6	0.73 (0.37,1.46) 1.03 (0.60,1.78)	0.373 0.909	0.933	≤18.6 >18.6	0.89 (0.57,1.39) 0.87 (0.58,1.30)
History of Thyroid Disease	15	0.347	≤18.6 >18.6	0.79 (0.36,1.73) 1.19 (0.78,1.82)	0.553 0.414	0.882	≤18.6 >18.6	0.97 (0.58,1.62) 0.92 (0.67,1.27)
Thyroid Gland	15	0.887	≤18.6 >18.6	0.94 (0.72,1.24) 0.97 (0.78,1.20)	0.679 0.766	0.754	≤18.6 >18.6	1.01 (0.84,1.22) 1.05 (0.89,1.24)
Testes	15	0.303	≤18.6 >18.6	1.49 (0.82,2.68) 1.00 (0.62,1.61)	0.189 0.987	0.536	≤18.6 >18.6	1.33 (0.86,2.07) 1.11 (0.77,1.61)
T ₃ % Uptake	15	0.777	≤18.6 >18.6	0.86 (0.46,1.63) 0.75 (0.35,1.60)	0.652 0.455	0.477	≤18.6 >18.6	0.91 (0.60,1.39) 0.72 (0.43,1.20)
TSH	15	0.520	≤18.6 >18.6	1.48 (0.65,3.36) 1.06 (0.60,1.88)	0.354 0.845	0.423	≤18.6 >18.6	1.23 (0.67,2.24) 0.90 (0.58,1.41)

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	C*T ^a	Minimal Assumption			Maximal Assumption			
			Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Testosterone	15	0.983	≤18.6 >18.6	0.75 (0.26,2.18) 0.74 (0.40,1.38)	0.600 0.347	0.444	≤18.6 >18.6	1.22 (0.59,2.55) 0.87 (0.56,1.34)	0.592 0.528
Fasting Glucose	15	0.256	≤18.6 >18.6	1.04 (0.74,1.45) 1.32 (1.04,1.67)	0.821 0.023	0.531	≤18.6 >18.6	1.18 (0.93,1.50) 1.30 (1.08,1.56)	0.183 0.006
Composite Diabetes Indicator	15	0.527	≤18.6 >18.6	1.13 (0.80,1.61) 1.30 (1.00,1.69)	0.488 0.047	0.638	≤18.6 >18.6	1.34 (1.03,1.74) 1.24 (1.01,1.52)	0.027 0.040
Composite Skin Test Diagnosis	16	0.474	≤18.6 >18.6	0.78 (0.44,1.39) 1.02 (0.64,1.61)	0.393 0.946	0.418	≤18.6 >18.6	0.77 (0.52,1.15) 0.96 (0.68,1.35)	0.202 0.814
Asthma	17	0.358	≤18.6 >18.6	1.17 (0.66,2.06) 0.76 (0.36,1.62)	0.590 0.474	0.176	≤18.6 >18.6	1.12 (0.75,1.67) 0.71 (0.42,1.23)	0.571 0.223
Bronchitis	17	0.281	≤18.6 >18.6	0.71 (0.47,1.08) 0.93 (0.70,1.24)	0.106 0.623	0.161	≤18.6 >18.6	0.76 (0.58,0.99) 0.97 (0.78,1.19)	0.044 0.750
Pleurisy	17	0.944	≤18.6 >18.6	1.22 (0.56,2.66) 1.18 (0.76,1.84)	0.612 0.455	0.452	≤18.6 >18.6	0.95 (0.55,1.65) 1.22 (0.86,1.74)	0.864 0.273
Pneumonia	17	0.931	≤18.6 >18.6	0.98 (0.64,1.48) 0.95 (0.63,1.43)	0.907 0.809	0.828	≤18.6 >18.6	0.94 (0.70,1.25) 0.98 (0.72,1.34)	0.653 0.903
Tuberculosis	17	0.614	≤18.6 >18.6	0.65 (0.27,1.56) 0.86 (0.45,1.64)	0.339 0.650	0.834	≤18.6 >18.6	0.81 (0.47,1.39) 0.87 (0.54,1.40)	0.435 0.567

TABLE Q-5. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	C*T ^a	Minimal Assumption			Maximal Assumption			
			Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Est. Relative Risk (95% C.I.)	p-Value
Thorax and Lung Abnormalities	17	0.496	≤18.6 >18.6	1.18 (0.74,1.89) 0.97 (0.71,1.34)	0.477 0.862	0.829	≤18.6 >18.6	1.11 (0.79,1.56) 1.16 (0.91,1.49)	0.552 0.231
Hyperresonance	17	0.905	≤18.6 >18.6	1.02 (0.58,1.79) 1.06 (0.67,1.69)	0.959 0.802	0.567	≤18.6 >18.6	1.07 (0.71,1.60) 1.25 (0.87,1.81)	0.751 0.228
Dullness	17	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Wheezes	17	0.500	≤18.6 >18.6	1.57 (0.75,3.27) 1.17 (0.75,1.82)	0.229 0.502	0.862	≤18.6 >18.6	1.28 (0.74,2.23) 1.21 (0.85,1.73)	0.375 0.293
Rales	17	0.765	≤18.6 >18.6	1.22 (0.45,3.31) 1.01 (0.51,2.03)	0.692 0.967	0.496	≤18.6 >18.6	0.94 (0.45,1.96) 1.29 (0.74,2.23)	0.864 0.373
X-Ray Interpretation	17	0.536	≤18.6 >18.6	1.19 (0.68,2.09) 0.95 (0.59,1.51)	0.539 0.816	0.534	≤18.6 >18.6	1.13 (0.76,1.68) 0.96 (0.68,1.36)	0.543 0.803

^aP-value for test of significance for homogeneity of relative risks (current dioxin continuous, time categorized); C*T=current dioxin-by-time interaction.

--: Estimated relative risk/confidence interval/p-value not given due to the sparse number of abnormalities.

Note: Estimated relative risk for a twofold increase in dioxin.

TABLE Q-6.
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Self-Perception of Health	6	Pct. Fair/Poor (n): Est. RR (95% C.I.): p-Value:	5.0 (785)	3.8 (345) 0.75 (0.39,1.42) 0.377	7.1 (196) 1.47 (0.78,2.77) 0.231	7.0 (187) 1.43 (0.75,2.73) 0.281	0.253
Appearance of Illness or Distress by Physician	6	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.5 (785)	0.6 (345) 1.14 (0.21,6.25) 0.881	0.0 (196) -- --	1.1 (187) 2.11 (0.38,11.61) 0.390	0.407
Relative Age	6	Pct. Older (n): Est. RR (95% C.I.): p-Value:	5.0 (786)	5.2 (345) 1.05 (0.59,1.87) 0.856	3.6 (196) 0.71 (0.31,1.61) 0.412	6.4 (187) 1.31 (0.67,2.56) 0.424	0.638
Percent Body Fat	6	Pct. Obese (n): Est. RR (95% C.I.): p-Value:	23.7 (786)	11.9 (345) 0.44 (0.30,0.63) <0.001	23.5 (196) 0.99 (0.68,1.43) 0.954	30.0 (187) 1.38 (0.97,1.96) 0.075	<0.001
Sedimentation Rate	6	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	3.3 (786)	3.5 (345) 1.05 (0.53,2.11) 0.884	7.1 (196) 2.25 (1.15,4.39) 0.018	9.1 (187) 2.92 (1.55,5.51) 0.001	0.003
All Skin Neoplasms (Verified)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	13.0 (739)	17.1 (333) 1.38 (0.97,1.98) 0.075	16.3 (184) 1.30 (0.84,2.04) 0.242	11.7 (179) 0.89 (0.54,1.47) 0.651	0.195
All Skin Neoplasms (Verified and Suspected)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	13.3 (739)	17.1 (333) 1.35 (0.95,1.93) 0.097	16.3 (184) 1.27 (0.82,1.99) 0.285	11.7 (179) 0.87 (0.53,1.44) 0.585	0.230

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Malignant Skin Neoplasms (Verified)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	7.4 (739)	9.9 (333) 1.37 (0.87,2.15) 0.174	9.2 (184) 1.27 (0.72,2.24) 0.417	5.0 (179) 0.66 (0.32,1.36) 0.258	0.197
Malignant Skin Neoplasms (Verified and Suspected)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	7.6 (739)	9.9 (333) 1.34 (0.85,2.11) 0.201	9.2 (184) 1.24 (0.70,2.19) 0.456	5.0 (179) 0.65 (0.31,1.33) 0.238	0.209
Benign Skin Neoplasms (Non-Blacks Only)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	6.0 (739)	7.2 (333) 1.23 (0.73,2.05) 0.437	7.1 (184) 1.20 (0.63,2.28) 0.575	7.3 (179) 1.24 (0.65,2.35) 0.516	0.828
Benign Skin Neoplasms (Blacks Included)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	5.9 (786)	7.5 (345) 1.31 (0.80,2.16) 0.285	7.1 (196) 1.24 (0.67,2.30) 0.500	7.0 (187) 1.20 (0.64,2.27) 0.572	0.722
Skin Neoplasms of Uncertain Behavior or Unspecified Nature (Verified)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (739)	0.3 (333) -- 0.622	0.0 (184) -- --	0.0 (179) -- --	..

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Skin Neoplasms of Uncertain Behavior or Unspecified Nature (Verified and Suspected)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.1 (739) 2.22 (0.14,35.65) 0.999	0.3 (333) 0.999	0.0 (184) 0.999	0.0 (179) 0.999	--
Basal Cell Carcinoma	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	6.6 (739) 1.39 (0.87,2.24) 0.171	9.0 (333) 0.329	8.7 (184) 1.34 (0.74,2.42)	3.9 (179) 0.57 (0.26,1.29)	0.117 0.177
Ear, Face, Head, and Neck	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	5.1 (739) 1.30 (0.76,2.24) 0.336	6.6 (333) 0.873	5.4 (184) 1.06 (0.52,2.17)	1.1 (179) 0.21 (0.05,0.87)	0.019 0.032
Trunk	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.4 (739) 1.57 (0.59,4.15) 0.368	2.1 (333) 1.21 (0.33,4.44)	1.6 (184) 0.776	2.2 (179) 1.67 (0.52,5.38)	0.765 0.393
Upper Extremities	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.5 (739) 1.67 (0.37,7.51) 0.754	0.9 (333) 0.999	0.5 (184) 0.999	0.0 (179) 0.838	0.633 --
Lower Extremities	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (739) --	0.0 (333) --	0.0 (184) --	0.0 (179) --	--

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category			Overall p-Value	
			Background	Unknown	Low		
Other Sites	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.1 (739)	0.0 (333) -- 0.999	1.6 (184) 12.23 (1.27,118.3) 0.053	0.6 (179) 4.15 (0.26,66.61) 0.704	0.011
<u>Sun Exposure-Related Malignant Skin Neoplasms</u>	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	7.0 (739)	9.9 (333) 1.45 (0.92,2.30) 0.110	9.2 (184) 1.34 (0.76,2.39) 0.313	4.5 (179) 0.62 (0.29,1.33) 0.215	0.101
Ear, Face, Head, and Neck	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	5.3 (739)	7.5 (333) 1.46 (0.87,2.45) 0.156	6.0 (184) 1.14 (0.57,2.28) 0.707	1.7 (179) 0.31 (0.09,1.00) 0.050	0.026
Trunk	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.8 (739)	2.1 (333) 1.20 (0.47,3.04) 0.701	1.6 (184) 0.93 (0.26,3.29) 0.904	2.2 (179) 1.28 (0.41,3.97) 0.673	0.955
Upper Extremities	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.5 (739)	1.2 (333) 2.23 (0.56,8.99) 0.426	0.5 (184) 1.00 (0.11,9.04) 0.999	0.6 (179) 1.03 (0.12,9.29) 0.999	0.661
Lower Extremities	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (739)	0.0 (333) -- --	0.0 (184) -- --	0.0 (179) -- --	--
Other Sites	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.1 (739)	0.0 (333) -- 0.999	1.6 (184) 12.23 (1.27,118.3) 0.053	0.6 (179) 4.15 (0.26,66.61) 0.704	0.011

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Melanoma	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.4 (739) 0.74 (0.08,7.13) 0.999	0.3 (333) -- 0.999	0.0 (184) -- 0.999	0.0 (179) -- 0.999	--
Ear, Face, Head, and Neck	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (739) -- 0.622	0.3 (333) -- --	0.0 (184) -- --	0.0 (179) -- --	--
Trunk	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.4 (739) -- 0.654	0.0 (333) -- 0.999	0.0 (184) -- 0.999	0.0 (179) -- 0.999	--
Upper Extremities	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (739) -- --	0.0 (333) -- --	0.0 (184) -- --	0.0 (179) -- --	--
Lower Extremities	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (739) -- --	0.0 (333) -- --	0.0 (184) -- --	0.0 (179) -- --	--
Other Sites	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (739) -- --	0.0 (333) -- --	0.0 (184) -- --	0.0 (179) -- --	--
Squamous Cell Carcinoma	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.1 (739) 4.46 (0.40,49.35) 0.458	0.6 (333) 4.03 (0.25,64.78) 0.718	0.5 (184) 4.15 (0.26,66.61) 0.704	0.6 (179) 4.15 (0.26,66.61) 0.704	0.571

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
<u>Basal Cell Carcinoma by Occupation</u>							
Q-62	Officer-Ear, Face, Head, and Neck vs. None	7 Pct. Yes (n): Est. RR (95% C.I.): p-Value:	6.2 (275) 1.22 (0.59,2.50) 0.720	7.4 (202) 0.999	5.4 (37) 0.87 (0.19,3.93) 0.999	0.0 (2) -- 0.999	0.912
	Officer-Other Sites vs. None	7 Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.5 (262) 2.76 (0.82,9.33) 0.161	4.1 (195) 1.84 (0.20,16.96) 0.954	2.8 (36) 0.27 (0.03,2.27) 0.366	0.0 (2) -- 0.999	0.398
	Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7 Pct. Yes (n): Est. RR (95% C.I.): p-Value:	7.0 (115) 1.11 (0.28,4.46) 0.999	7.7 (39) 0.27 (0.03,2.27) 0.366	2.0 (50) 0.48 (0.06,4.03) 0.850	3.4 (29) 0.48 (0.06,4.03) 0.850	0.530
	Enlisted Flyer-Other Sites vs. None	7 Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.9 (108) 0.999	0.0 (36) 0.999	2.0 (50) 0.999	12.5 (32) 15.29 (1.62,144.2) 0.020	0.003
	Enlisted Groundcrew-Ear, Face, Head, and Neck vs. None	7 Pct. Yes (n): Est. RR (95% C.I.): p-Value:	3.8 (338) 1.25 (0.40,3.94) 0.703	4.8 (84) 2.08 (0.81,5.39) 0.131	7.7 (91) 0.18 (0.02,1.36) 0.095	0.7 (143) 0.38 (0.05,3.21) 0.648	0.052
	Enlisted Groundcrew-Other Sites vs. None	7 Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.8 (331) 0.540	0.0 (80) -- 0.540	4.5 (88) 2.58 (0.71,9.37) 0.274	0.7 (143) 0.38 (0.05,3.21) 0.648	0.091

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value			
			Background	Unknown	Low	High				
<u>Sun Exposure-Related Malignant Skin Neoplasms by Occupation</u>										
Officer-Ear, Face, Head, and Neck vs. None	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	6.6 (274)	8.9 (202) 1.39 (0.70,2.75) 0.434	5.4 (37) 0.81 (0.18,3.67) 0.999	0.0 (2) -- 0.999	0.723			
Officer-Other Sites vs. None	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.9 (261)	4.2 (192) 2.23 (0.72,6.93) 0.258	2.8 (36) 1.46 (0.17,12.89) 0.999	0.0 (2) -- 0.999	0.555			
Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	7.0 (114)	7.7 (39) 1.10 (0.28,4.42) 0.999	4.0 (50) 0.55 (0.11,2.72) 0.728	3.4 (29) 0.47 (0.06,3.99) 0.842	0.779			
Enlisted Flyer-Other Sites vs. None	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.9 (108)	0.0 (36) -- 0.999	2.0 (49) 1.10 (0.10,12.47) 0.999	12.5 (32) 7.57 (1.31,43.46) 0.049	0.010			
Enlisted Groundcrew-Ear, Face, Head, and Neck vs. None	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	3.8 (338)	4.8 (84) 1.25 (0.40,3.94) 0.896	7.7 (91) 2.08 (0.81,5.39) 0.214	1.4 (143) 0.36 (0.08,1.60) 0.256	0.114			
Enlisted Groundcrew-Other Sites vs. None	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.8 (331)	0.0 (80) -- 0.540	4.5 (88) 2.58 (0.71,9.37) 0.274	0.7 (142) 0.38 (0.05,3.23) 0.654	0.091			

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Basal Cell Carcinoma (One vs. None)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	5.7 (732)	6.5 (324) 1.14 (0.66,1.96) 0.732	6.1 (179) 1.08 (0.54,2.13) 0.950	3.4 (178) 0.57 (0.24,1.37) 0.276	0.524
Basal Cell Carcinoma (Multiple vs. None)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.0 (697)	2.9 (312) 2.93 (1.08,7.93) 0.060	2.9 (173) 2.93 (0.92,9.36) 0.139	0.6 (173) 0.57 (0.07,4.69) 0.999	0.053
All Systemic Neoplasms (Verified)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	8.3 (786)	5.2 (345) 0.61 (0.36,1.05) 0.072	9.7 (196) 1.19 (0.70,2.04) 0.524	10.7 (187) 1.33 (0.78,2.25) 0.294	0.087
All Systemic Neoplasms (Verified and Suspected)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	8.4 (786)	5.2 (345) 0.60 (0.35,1.03) 0.063	9.7 (196) 1.17 (0.69,2.00) 0.564	10.7 (187) 1.31 (0.77,2.22) 0.321	0.084
Malignant Systemic Neoplasms	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.7 (786)	1.2 (345) 0.70 (0.23,2.16) 0.740	5.1 (196) 3.20 (1.38,7.40) 0.016	0.0 (187) -- 0.122	0.001
Benign Systemic Neoplasms	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	6.0 (786)	4.1 (345) 0.67 (0.36,1.23) 0.190	4.6 (196) 0.76 (0.36,1.57) 0.455	10.2 (187) 1.78 (1.02,3.11) 0.043	0.044

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Systemic Neoplasms of Uncertain Behavior or Unspecified Nature (Verified)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.8 (786)	0.0 (345) -- 0.224	0.0 (196) -- 0.524	0.5 (187) 0.70 (0.08,5.84) 0.999	0.253
Systemic Neoplasms of Uncertain Behavior or Unspecified Nature (Verified and Suspected)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.9 (786)	0.0 (345) -- 0.155	0.0 (196) -- 0.418	0.5 (187) 0.60 (0.07,4.89) 0.999	0.184
Systemic Neoplasms: Location/Site							
Ear, Face, Head, and Neck	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.1 (786)	0.0 (345) -- 0.999	0.0 (196) -- 0.999	0.0 (187) -- 0.999	--
Oral Cavity, Pharynx, and Larynx	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.1 (786)	0.0 (345) -- 0.999	0.0 (196) -- 0.999	0.0 (187) -- 0.999	--
Brain	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (786)	0.0 (345) -- --	0.0 (196) -- --	0.0 (187) -- --	--

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Thymus and Mediastinum	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (786)	0.3 (345) -- 0.610	0.0 (196) -- --	0.0 (187) -- --	--
Thyroid Gland	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (786)	0.0 (345) -- --	0.0 (196) -- --	0.0 (187) -- --	--
Bronchus and Lung	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (786)	0.6 (345) -- 0.186	0.5 (196) -- 0.400	0.0 (187) -- --	--
Colon and Rectum	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.3 (786)	0.0 (345) -- 0.999	0.0 (196) -- 0.999	0.0 (187) -- 0.999	--
Kidney and Bladder	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.3 (786)	0.3 (345) 1.14 (0.10,12.61) 0.999	2.0 (196) 8.17 (1.49,44.91) 0.033	0.0 (187) -- 0.999	0.006
Prostate	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.5 (786)	0.0 (345) -- 0.466	1.0 (196) 2.02 (0.37,11.08) 0.688	0.0 (187) -- 0.850	--
Testicles	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (786)	0.0 (345) -- --	1.0 (196) -- 0.079	0.0 (187) -- --	--

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Ill-Defined Sites	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (786)	0.0 (345)	0.0 (196)	0.0 (187)	--
Carcinoma in Situ of Penis	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.1 (786)	0.0 (345)	0.0 (196)	0.0 (187)	--
Q Carcinoma in Situ of Other and Unspecified Sites	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (786)	0.0 (345)	0.0 (196)	0.0 (187)	--
Hodgkin's Disease	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.1 (786)	0.0 (345)	0.0 (196)	0.0 (187)	--
Leukemia	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.0 (786)	0.0 (345)	0.5 (196)	0.0 (187)	--
Other Malignant Neoplasms of Lymphoid and Histiocytic Tissue	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.1 (786)	0.3 (345) 2.28 (0.14,36.59) 0.999	0.5 (196) 4.03 (0.25,64.65) 0.720	0.0 (187) -- 0.999	0.641

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
All Skin and Systemic Neoplasms (Verified)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	19.6 (786)	20.6 (345) 1.06 (0.78,1.46) 0.702	23.5 (196) 1.26 (0.87,1.83) 0.230	21.4 (187) 1.12 (0.76,1.65) 0.580	0.679
All Skin and Systemic Neoplasms (Verified and Suspected)	7	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	19.8 (786)	20.6 (345) 1.05 (0.76,1.43) 0.777	23.5 (196) 1.24 (0.85,1.80) 0.263	21.4 (187) 1.10 (0.74,1.63) 0.636	0.730
Inflammatory Diseases	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.1 (779)	0.3 (343) 2.27 (0.14,36.48) 0.999	0.0 (196) -- 0.999	0.5 (187) 4.18 (0.26,67.18) 0.700	0.616
Hereditary and Degenerative Diseases	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	4.0 (784)	5.6 (342) 1.43 (0.80,2.57) 0.232	3.6 (196) 0.90 (0.39,2.07) 0.804	3.2 (187) 0.81 (0.33,1.96) 0.633	0.524
Peripheral Disorders	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	14.7 (781)	12.3 (341) 0.81 (0.56,1.19) 0.285	12.8 (196) 0.85 (0.53,1.35) 0.482	16.0 (187) 1.11 (0.71,1.71) 0.650	0.564
Disorders of the Eye	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	15.8 (783)	16.7 (342) 1.06 (0.75,1.50) 0.727	16.9 (195) 1.08 (0.71,1.65) 0.712	17.6 (187) 1.14 (0.75,1.74) 0.546	0.930
Tympanic Membrane Disorder	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	4.1 (779)	3.5 (342) 0.85 (0.43,1.67) 0.635	6.7 (193) 1.69 (0.87,3.28) 0.124	4.9 (185) 1.19 (0.56,2.55) 0.647	0.375
Otitis	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	12.4 (783)	14.0 (343) 1.15 (0.79,1.67) 0.459	12.8 (196) 1.03 (0.65,1.66) 0.889	8.6 (187) 0.66 (0.38,1.15) 0.145	0.308

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Hearing Loss	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	76.0 (776) 0.95 (0.71,1.28) 0.731	75.1 (341) 0.94 (0.65,1.35) 0.736	74.9 (195) 1.35 (0.94,1.93) 0.100	66.7 (186) 1.32 (0.92,1.91) 0.009	0.082
Other Neurological Disorders	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	21.6 (781) 0.74 (0.53,1.03) 0.073	17.0 (342) 1.35 (0.94,1.93) 0.100	27.2 (195) 0.100 0.135	26.7 (187) 1.32 (0.92,1.91) 0.135	0.014
Smell	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.8 (784) 0.38 (0.05,3.16) 0.640	0.3 (343) 2.02 (0.50,8.13) 0.522	1.5 (196) 0.0 (196) 0.552	0.0 (187) -- 0.552	0.227
Visual Fields	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.8 (782) 0.38 (0.05,3.15) 0.636	0.3 (343) 0.520	0.0 (196) 0.550	0.0 (187) --	0.313
Light Reaction	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	1.0 (782) 0.85 (0.23,3.24) 0.999	0.9 (343) 0.332	0.0 (196) 0.332	1.1 (187) 1.05 (0.22,4.97) 0.999	0.565
Ocular Movement	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.5 (783) 0.57 (0.06,5.11) 0.999	0.3 (343) 3.03 (0.67,13.63) 0.296	1.5 (196) 0.0 (196) 0.848	0.0 (187) -- 0.848	0.165
Facial Sensation	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.6 (783) -- 0.334	0.0 (343) 0.80 (0.09,6.87) 0.999	0.5 (196) 0.80 (0.09,6.87) 0.999	0.5 (187) 0.84 (0.10,7.20) 0.999	0.543
Smile	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	1.2 (784) 0.51 (0.11,2.35) 0.384	0.6 (343) 0.44 (0.06,3.51) 0.439	0.5 (196) 0.44 (0.06,3.51) 0.439	1.1 (187) 0.93 (0.20,4.34) 0.927	0.711

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Palpebral Fissure	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	1.3 (784)	1.2 (343) 0.91 (0.28,2.93) 0.879	2.0 (196) 1.61 (0.50,5.20) 0.424	1.6 (187) 1.26 (0.34,4.63) 0.726	0.850
Balance	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.0 (783)	0.0 (343) -- --	0.5 (196) -- 0.400	0.5 (187) -- 0.386	0.117
Speech	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.1 (783)	0.0 (343) -- 0.999	0.5 (196) 4.01 (0.25,64.40) 0.720	0.0 (187) -- 0.999	0.421
Neck Range of Motion	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	11.7 (784)	12.2 (343) 1.05 (0.71,1.55) 0.808	12.2 (196) 1.05 (0.65,1.69) 0.843	9.1 (187) 0.75 (0.44,1.30) 0.305	0.692
Cranial Nerve Index	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	16.0 (773)	14.7 (341) 0.90 (0.63,1.28) 0.559	17.5 (194) 1.11 (0.73,1.69) 0.617	11.5 (183) 0.68 (0.41,1.11) 0.123	0.338
Cranial Nerve Index Without Range of Motion	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	5.1 (773)	2.9 (341) 0.57 (0.28,1.15) 0.117	5.7 (194) 1.13 (0.57,2.25) 0.725	3.8 (183) 0.75 (0.33,1.70) 0.489	0.320
Pin Prick	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	5.8 (771)	5.3 (339) 0.90 (0.52,1.59) 0.727	5.2 (194) 0.88 (0.43,1.77) 0.714	6.6 (183) 1.13 (0.59,2.19) 0.712	0.925
Light Touch	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	4.3 (771)	4.1 (339) 0.96 (0.51,1.82) 0.909	4.1 (194) 0.96 (0.44,2.12) 0.923	3.8 (183) 0.89 (0.39,2.04) 0.783	0.994

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Muscle Status	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	2.2 (783)	1.8 (342) 0.80 (0.31,2.06) 0.650	2.0 (196) 0.94 (0.31,2.82) 0.910	2.1 (187) 0.98 (0.33,2.96) 0.978	0.974
Vibration	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	1.4 (771)	0.9 (339) 0.62 (0.17,2.22) 0.460	1.6 (194) 1.09 (0.30,3.93) 0.901	1.6 (183) 1.15 (0.32,4.17) 0.830	0.844
Patellar Reflex	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	1.2 (783)	1.2 (343) 1.01 (0.31,3.32) 0.981	2.0 (196) 1.79 (0.55,5.88) 0.336	2.7 (187) 2.36 (0.78,7.13) 0.127	0.434
Achilles Reflex	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	5.6 (784)	3.8 (342) 0.66 (0.35,1.25) 0.205	7.7 (195) 1.40 (0.76,2.57) 0.277	5.4 (187) 0.95 (0.47,1.92) 0.887	0.290
Biceps Reflex	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	1.3 (784)	0.6 (343) 0.45 (0.10,2.08) 0.482	0.0 (196) -- 0.212	0.0 (187) -- 0.232	0.135
Babinski Reflex	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.3 (784)	0.6 (343) 2.29 (0.32,16.35) 0.712	0.0 (196) -- 0.999	0.5 (187) 2.10 (0.19,23.31) 0.948	0.641
Tremor	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	2.7 (784)	2.6 (343) 0.98 (0.44,2.16) 0.958	2.0 (196) 0.76 (0.26,2.23) 0.614	3.7 (187) 1.41 (0.59,3.37) 0.436	0.788
Coordination	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.4 (783)	1.2 (342) 3.08 (0.68,13.82) 0.143	1.0 (196) 2.68 (0.44,16.15) 0.282	2.7 (187) 7.14 (1.69,30.16) 0.007	0.056

TABLE Q-6. (Continued)

Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Romberg Sign	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.0 (783)	0.0 (343) -- --	0.5 (196) -- 0.400	0.0 (187) -- 0.386	0.117
Gait	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	2.2 (783)	2.6 (342) 1.22 (0.54,2.76) 0.637	3.1 (196) 1.42 (0.55,3.66) 0.464	3.7 (187) 1.75 (0.72,4.29) 0.219	0.657
CNS Index	8	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	4.9 (783)	5.3 (342) 1.09 (0.61,1.94) 0.771	4.6 (196) 0.94 (0.45,1.99) 0.878	8.6 (187) 1.83 (1.00,3.37) 0.050	0.276
Psychoses	9	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	2.7 (783)	1.2 (341) 0.43 (0.15,1.26) 0.125	2.1 (194) 0.76 (0.26,2.25) 0.625	1.6 (185) 0.60 (0.18,2.03) 0.409	0.377
Alcohol Dependence	9	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	6.0 (783)	7.3 (341) 1.24 (0.75,2.05) 0.404	5.2 (194) 0.85 (0.42,1.72) 0.652	8.1 (185) 1.38 (0.75,2.53) 0.295	0.563
Drug Dependence	9	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.3 (783)	0.0 (341) -- --	0.0 (194) -- --	0.0 (185) -- --	--
Anxiety	9	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	15.1 (781)	13.2 (340) 0.86 (0.59,1.24) 0.414	18.0 (194) 1.24 (0.82,1.87) 0.316	17.8 (185) 1.22 (0.80,1.86) 0.359	0.372
Other Neuroses	9	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	37.1 (777)	35.5 (335) 0.94 (0.72,1.22) 0.624	48.7 (193) 1.61 (1.17,2.21) 0.003	43.5 (184) 1.31 (0.94,1.81) 0.108	0.008

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Q-73	9	Pct. Yes (n):	12.1 (783)	9.4 (341)	7.2 (194)	9.2 (185)	0.144
		Est. RR (95% C.I.):		0.75 (0.49,1.14)	0.56 (0.31,1.01)	0.73 (0.43,1.26)	
		p-Value:		0.182	0.054	0.262	
		Pct. Yes (n):	14.1 (783)	12.3 (341)	12.4 (194)	13.0 (185)	
		Est. RR (95% C.I.):		0.86 (0.59,1.26)	0.86 (0.54,1.39)	0.91 (0.57,1.46)	
		p-Value:		0.435	0.543	0.703	
		Pct. Yes (n):	11.8 (783)	10.6 (341)	11.3 (194)	9.7 (185)	
		Est. RR (95% C.I.):		0.89 (0.59,1.33)	0.96 (0.59,1.57)	0.81 (0.48,1.38)	
		p-Value:		0.563	0.874	0.437	
	9	Pct. Yes (n):	9.3 (783)	6.2 (341)	9.3 (194)	13.0 (185)	0.071
		Est. RR (95% C.I.):		0.64 (0.39,1.06)	0.99 (0.58,1.71)	1.45 (0.89,2.37)	
		p-Value:		0.080	0.985	0.139	
		Pct. Yes (n):	3.5 (783)	3.5 (341)	2.6 (194)	4.9 (185)	
		Est. RR (95% C.I.):		1.02 (0.51,2.04)	0.74 (0.28,1.95)	1.43 (0.66,3.10)	
		p-Value:		0.952	0.543	0.362	
		Pct. Yes (n):	2.6 (783)	1.8 (341)	4.6 (194)	3.8 (185)	
		Est. RR (95% C.I.):		0.68 (0.27,1.72)	1.86 (0.83,4.14)	1.50 (0.62,3.60)	
		p-Value:		0.418	0.131	0.364	
	9	Pct. Yes (n):	3.1 (780)	2.4 (341)	2.6 (194)	8.2 (183)	0.010
		Est. RR (95% C.I.):		0.76 (0.34,1.70)	0.83 (0.31,2.21)	2.81 (1.44,5.48)	
		p-Value:		0.500	0.714	0.002	
		Pct. Yes (n):	3.6 (782)	3.2 (341)	2.6 (194)	7.1 (184)	
		Est. RR (95% C.I.):		0.90 (0.44,1.82)	0.71 (0.27,1.87)	2.05 (1.04,4.03)	
		p-Value:		0.765	0.491	0.038	

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Sleepwalking	9	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.8 (783)	2.1 (341) 1.15 (0.46,2.88) 0.763	0.5 (194) 0.28 (0.04,2.18) 0.226	3.8 (185) 2.16 (0.86,5.43) 0.102	0.131
Abnormal Movement/ Activity During the Night	9	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	3.3 (783)	1.8 (341) 0.52 (0.21,1.28) 0.155	5.7 (194) 1.75 (0.85,3.61) 0.129	3.2 (185) 0.98 (0.40,2.41) 0.958	0.118
Sleep Problems Requiring Medication	9	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.5 (783)	2.1 (341) 1.35 (0.53,3.45) 0.535	2.6 (194) 1.70 (0.59,4.88) 0.325	0.5 (185) 0.35 (0.05,2.70) 0.314	0.368
Snore Loudly in All Sleeping Positions	9	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	6.9 (783)	4.7 (341) 0.66 (0.37,1.18) 0.162	9.8 (194) 1.47 (0.85,2.54) 0.172	8.7 (185) 1.28 (0.71,2.29) 0.409	0.114
Insomnia	9	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	23.8 (783)	21.7 (341) 0.89 (0.66,1.21) 0.453	23.2 (194) 0.97 (0.67,1.41) 0.870	21.1 (185) 0.86 (0.58,1.27) 0.439	0.810
Overall Sleep Disorder Index	9	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	33.9 (780)	30.5 (341) 0.86 (0.65,1.13) 0.272	34.0 (194) 1.01 (0.72,1.40) 0.963	36.6 (183) 1.13 (0.81,1.58) 0.478	0.522
SCL-90-R							
Anxiety	9	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	5.4 (690)	4.4 (294) 0.82 (0.43,1.56) 0.539	7.6 (171) 1.45 (0.75,2.80) 0.265	10.8 (167) 2.13 (1.18,3.85) 0.012	0.043
Depression	9	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	7.3 (690)	6.5 (294) 0.88 (0.51,1.53) 0.660	7.6 (171) 1.05 (0.56,1.99) 0.873	13.2 (167) 1.94 (1.14,3.31) 0.015	0.081

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
SCL-90	9	Pct. Abn. (n):	4.4 (690)	3.7 (294)	5.9 (171)	6.0 (167)	0.602
		Est. RR (95% C.I.):		0.86 (0.42,1.73)	1.37 (0.65,2.85)	1.40 (0.67,2.93)	
		p-Value:		0.663	0.406	0.369	
		Pct. Abn. (n):	5.8 (690)	3.7 (294)	5.3 (171)	8.4 (167)	
		Est. RR (95% C.I.):		0.63 (0.32,1.25)	0.90 (0.43,1.90)	1.49 (0.79,2.80)	
		p-Value:		0.187	0.787	0.220	
		Pct. Abn. (n):	6.4 (690)	4.4 (294)	8.8 (171)	10.8 (167)	
		Est. RR (95% C.I.):		0.68 (0.36,1.28)	1.41 (0.77,2.60)	1.77 (1.00,3.16)	
		p-Value:		0.232	0.269	0.051	
		Pct. Abn. (n):	3.5 (690)	3.1 (294)	5.3 (171)	3.0 (167)	0.645
		Est. RR (95% C.I.):		0.88 (0.40,1.91)	1.54 (0.70,3.38)	0.86 (0.32,2.28)	
		p-Value:		0.740	0.280	0.756	
		Pct. Abn. (n):	6.8 (690)	3.1 (294)	8.2 (171)	7.8 (167)	
		Est. RR (95% C.I.):		0.43 (0.21,0.89)	1.22 (0.66,2.27)	1.15 (0.61,2.19)	
		p-Value:		0.024	0.531	0.659	
		Pct. Abn. (n):	8.3 (690)	6.1 (294)	8.2 (171)	11.4 (167)	
		Est. RR (95% C.I.):		0.72 (0.42,1.25)	0.99 (0.54,1.82)	1.43 (0.82,2.47)	
		p-Value:		0.249	0.975	0.206	
		Pct. Abn. (n):	7.7 (690)	7.5 (294)	9.4 (171)	12.0 (167)	0.323
		Est. RR (95% C.I.):		0.97 (0.58,1.63)	1.24 (0.69,2.23)	1.64 (0.95,2.82)	
		p-Value:		0.915	0.471	0.077	
		Pct. Abn. (n):	6.1 (690)	5.1 (294)	7.6 (171)	12.6 (167)	
		Est. RR (95% C.I.):		0.83 (0.45,1.52)	1.27 (0.67,2.42)	2.22 (1.28,3.86)	
		p-Value:		0.545	0.469	0.005	

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value	
			Background	Unknown	Low	High		
Q-76	Positive Symptom Total	9	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	6.1 (690) 0.83 (0.45,1.52) 0.545	5.1 (294) 1.16 (0.60,2.26) 0.653	7.0 (171) 1.50 (0.88,2.54) 0.135	11.4 (167) 1.98 (1.12,3.50) 0.019	0.084
	Positive Symptom Distress Index	9	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	8.6 (690) 0.66 (0.38,1.15) 0.139	5.8 (294) 1.50 (0.88,2.54) 0.135	12.3 (171) 1.29 (0.74,2.26) 0.367	10.8 (167) 1.29 (0.74,2.26) 0.367	0.076
	Viral Hepatitis	10	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	41.5 (761) 0.78 (0.59,1.01) 0.062	35.5 (335) 0.99 (0.72,1.37) 0.967	41.4 (191) 1.12 (0.80,1.55) 0.512	44.2 (181) 1.12 (0.80,1.55) 0.512	0.179
	Chronic Liver Disease and Cirrhosis (Alcohol-Related)	10	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	3.3 (783) 1.42 (0.75,2.68) 0.286	4.6 (345) 0.77 (0.29,2.02) 0.589	2.6 (195) 1.47 (0.68,3.20) 0.330	4.8 (187) 1.47 (0.68,3.20) 0.330	0.475
	Chronic Liver Disease and Cirrhosis (Nonalcohol-Related)	10	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.9 (786) 0.98 (0.25,3.80) 0.999	0.9 (345) 1.73 (0.44,6.74) 0.642	1.5 (196) 0.0 (187) --	0.0 (187) 0.446 0.446	0.446
	Other Disorders of the Liver	10	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	7.1 (777) 0.82 (0.48,1.38) 0.449	5.9 (342) 1.33 (0.76,2.32) 0.319	9.2 (196) 1.75 (1.04,2.95) 0.036	11.8 (187) 1.75 (1.04,2.95) 0.036	0.087
	Jaundice (Unspecified)	10	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	2.2 (762) 1.49 (0.69,3.21) 0.412	3.3 (335) -- 0.042	0.0 (193) -- 0.042	1.1 (181) 0.49 (0.11,2.14) 0.514	0.056
	Hepatomegaly	10	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	2.2 (785) 0.40 (0.12,1.36) 0.142	0.9 (345) 1.43 (0.56,3.67) 0.461	3.1 (196) 1.25 (0.45,3.43) 0.667	2.7 (186) 1.25 (0.45,3.43) 0.667	0.230

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Ulcer	10	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	7.2 (764)	7.3 (331) 1.01 (0.61,1.66) 0.976	4.7 (193) 0.63 (0.31,1.30) 0.211	8.7 (185) 1.22 (0.68,2.18) 0.502	0.455
Skin Bruises, Patches, or Sensitivity	10	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	18.4 (768)	25.8 (334) 1.54 (1.14,2.09) 0.005	27.8 (194) 1.72 (1.19,2.47) 0.004	31.9 (185) 2.08 (1.45,2.98) <0.001	<0.001
Current Hepatomegaly	10	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.4 (782)	0.0 (341) -- 0.036	1.6 (194) 1.10 (0.30,3.98) 0.999	2.7 (186) 1.94 (0.66,5.64) 0.350	0.052
AST	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	3.6 (779)	3.5 (341) 0.98 (0.49,1.95) 0.950	3.1 (193) 0.86 (0.35,2.11) 0.743	4.8 (186) 1.36 (0.63,2.94) 0.429	0.832
ALT	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	10.9 (779)	9.4 (341) 0.85 (0.55,1.30) 0.442	13.5 (193) 1.27 (0.79,2.04) 0.318	15.1 (186) 1.45 (0.91,2.29) 0.116	0.197
GGT	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	6.0 (779)	5.6 (341) 0.92 (0.53,1.59) 0.763	9.8 (193) 1.70 (0.97,2.97) 0.062	10.8 (186) 1.88 (1.08,3.25) 0.025	0.047
Alkaline Phosphotase	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	4.7 (779)	3.8 (341) 0.79 (0.42,1.52) 0.485	4.7 (193) 0.98 (0.47,2.07) 0.960	5.4 (186) 1.14 (0.56,2.34) 0.721	0.851
D-Glucaric Acid	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	0.4 (746)	1.5 (328) 3.83 (0.91,16.14) 0.123	0.0 (190) -- 0.999	0.5 (182) 1.37 (0.14,13.23) 0.999	0.107

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Total Bilirubin	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	3.9 (779)	3.2 (341) 0.83 (0.41,1.68) 0.609	4.1 (193) 1.08 (0.49,2.39) 0.850	0.5 (186) 0.13 (0.02,1.00) 0.050	0.048
Direct Bilirubin	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	3.9 (779)	2.3 (341) 0.60 (0.27,1.32) 0.205	4.1 (193) 1.08 (0.49,2.39) 0.850	2.7 (186) 0.69 (0.26,1.80) 0.448	0.500
LDH	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	1.5 (779)	1.5 (341) 0.95 (0.33,2.72) 0.999	0.0 (193) -- 0.138	0.5 (186) 0.35 (0.05,2.67) 0.504	0.262
Cholesterol	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	11.2 (779)	16.1 (341) 1.53 (1.06,2.20) 0.022	13.0 (193) 1.18 (0.74,1.90) 0.487	12.4 (186) 1.12 (0.69,1.83) 0.644	0.164
HDL	10	Pct. Abn. Low (n): Est. RR (95% C.I.): p-Value:	3.6 (779)	3.5 (341) 0.98 (0.49,1.95) 0.950	4.1 (193) 1.16 (0.52,2.59) 0.717	5.4 (186) 1.52 (0.73,3.20) 0.265	0.721
Cholesterol-HDL Ratio	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	43.4 (779)	38.1 (341) 0.80 (0.62,1.04) 0.100	49.2 (193) 1.26 (0.92,1.73) 0.145	50.0 (186) 1.30 (0.95,1.80) 0.104	0.021
Triglycerides	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	5.4 (779)	3.2 (341) 0.58 (0.30,1.15) 0.120	9.3 (193) 1.80 (1.01,3.21) 0.045	11.8 (186) 2.35 (1.37,4.05) 0.002	<0.001
Creatine Kinase	10	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	7.8 (779)	5.3 (341) 0.66 (0.38,1.13) 0.127	5.2 (193) 0.64 (0.32,1.28) 0.209	3.8 (186) 0.46 (0.21,1.02) 0.057	0.099

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TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Occurrence of Acne (Lifetime)	11	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	50.3 (786)	51.0 (345) 1.03 (0.80,1.33) 0.814	54.1 (196) 1.17 (0.85,1.60) 0.338	51.3 (187) 1.04 (0.76,1.44) 0.790	0.819
Acne Relative to SEA Tour (Pre/Post-SEA and Post-SEA vs. Pre-SEA and None)	11	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	48.2 (786)	48.4 (345) 1.01 (0.78,1.30) 0.954	52.6 (196) 1.19 (0.87,1.63) 0.278	50.8 (187) 1.11 (0.81,1.53) 0.525	0.691
Acne Relative to SEA Tour (Post-SEA vs. None)	11	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	44.1 (700)	45.5 (310) 1.06 (0.81,1.38) 0.693	48.6 (175) 1.20 (0.86,1.67) 0.293	45.2 (166) 1.04 (0.74,1.47) 0.809	0.771
Acne Relative to SEA Tour (Pre/Post-SEA vs. Pre-SEA)	11	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	81.4 (86)	74.3 (35) 0.66 (0.26,1.68) 0.522	85.7 (21) 1.37 (0.36,5.24) 0.918	95.2 (21) 4.57 (0.67,31.30) 0.210	0.245
Location Of Acne (Post-SEA)	11	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	15.5 (309)	26.2 (141) 1.93 (1.19,3.14) 0.008	20.0 (85) 1.36 (0.74,2.51) 0.327	16.0 (75) 1.04 (0.52,2.06) 0.921	0.060
Location Of Acne (Pre/Post-SEA and Post-SEA)	11	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	20.8 (379)	28.7 (167) 1.53 (1.01,2.32) 0.045	22.3 (103) 1.09 (0.65,1.85) 0.743	21.1 (95) 1.01 (0.58,1.76) 0.964	0.241
Comedones	11	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	22.8 (786)	21.5 (345) 0.93 (0.68,1.26) 0.623	23.5 (196) 1.04 (0.72,1.51) 0.836	19.8 (187) 0.84 (0.56,1.24) 0.377	0.779
Acneiform Lesions	11	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	11.3 (786)	7.0 (345) 0.59 (0.37,0.94) 0.026	11.7 (196) 1.04 (0.64,1.70) 0.871	9.6 (187) 0.83 (0.49,1.42) 0.505	0.111

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Acneiform Scars	11	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	9.5 (786)	11.0 (345) 1.17 (0.78,1.77) 0.447	13.8 (196) 1.51 (0.95,2.43) 0.084	14.4 (187) 1.60 (1.00,2.57) 0.051	0.151
Depigmentation	11	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	5.7 (786)	4.9 (345) 0.85 (0.48,1.51) 0.588	5.6 (196) 0.98 (0.50,1.93) 0.951	7.5 (187) 1.33 (0.72,2.48) 0.366	0.702
Inclusion Cysts	11	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	10.4 (786)	12.5 (345) 1.22 (0.83,1.81) 0.316	14.8 (196) 1.49 (0.95,2.35) 0.086	6.4 (187) 0.59 (0.31,1.10) 0.098	0.041
Hyperpigmentation	11	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	16.0 (786)	11.0 (345) 0.65 (0.44,0.95) 0.028	14.3 (196) 0.87 (0.56,1.36) 0.548	19.8 (187) 1.29 (0.86,1.94) 0.217	0.037
Other Abnormalities	11	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	74.6 (786)	78.8 (345) 1.27 (0.94,1.72) 0.121	71.9 (196) 0.87 (0.62,1.24) 0.455	71.1 (187) 0.84 (0.59,1.20) 0.337	0.154
Dermatology Index	11	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	38.0 (786)	38.3 (345) 1.01 (0.78,1.31) 0.944	43.9 (196) 1.27 (0.93,1.75) 0.135	37.4 (187) 0.97 (0.70,1.35) 0.878	0.479
Reported/Verified Essential Hypertension	12	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	32.7 (703)	28.1 (320) 0.80 (0.60,1.08) 0.142	37.9 (177) 1.25 (0.89,1.76) 0.197	39.4 (155) 1.33 (0.93,1.91) 0.115	0.043
Reported Heart Disease (Excluding Essential Hypertension)	12	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	38.1 (703)	44.7 (320) 1.31 (1.00,1.71) 0.047	37.3 (177) 0.97 (0.69,1.36) 0.838	27.1 (155) 0.60 (0.41,0.89) 0.010	0.003

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Q	12	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	38.0 (703)	44.4 (320) 1.30 (1.00,1.70) 0.053	37.3 (177) 0.97 (0.69,1.36) 0.865	26.5 (155) 0.59 (0.40,0.87) 0.007	0.002
		Pct. Yes (n): Est. RR (95% C.I.): p-Value:	4.6 (703)	2.8 (320) 0.61 (0.29,1.29) 0.193	7.3 (177) 1.66 (0.85,3.24) 0.135	2.6 (155) 0.56 (0.19,1.59) 0.274	0.083
		Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	19.6 (703)	16.6 (320) 0.81 (0.57,1.15) 0.244	18.1 (177) 0.90 (0.59,1.38) 0.640	21.3 (155) 1.11 (0.72,1.70) 0.640	0.560
		Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	4.3 (703)	3.1 (320) 0.72 (0.35,1.50) 0.384	2.3 (177) 0.52 (0.18,1.49) 0.223	3.9 (155) 0.90 (0.37,2.21) 0.824	0.547
		Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	18.5 (703)	14.4 (320) 0.74 (0.51,1.07) 0.107	18.1 (177) 0.97 (0.63,1.49) 0.899	14.2 (155) 0.73 (0.45,1.19) 0.206	0.288
		Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.7 (703)	0.6 (320) 0.88 (0.17,4.55) 0.999	1.1 (177) 1.60 (0.31,8.29) 0.854	0.0 (155) -- 0.736	0.467
		Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.4 (703)	0.0 (320) -- --	0.0 (177) -- --	0.0 (155) -- --	--
		Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	10.8 (703)	7.8 (320) 0.70 (0.44,1.12) 0.138	12.4 (177) 1.17 (0.71,1.94) 0.541	11.6 (155) 1.08 (0.63,1.87) 0.772	0.308

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
ECG: Bradycardia	12	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	5.8 (703)	5.9 (320) 1.02 (0.58,1.79) 0.947	3.4 (177) 0.57 (0.24,1.36) 0.202	2.6 (155) 0.43 (0.15,1.21) 0.110	0.184
ECG: Arrhythmia	12	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	3.7 (703)	4.7 (320) 1.28 (0.67,2.45) 0.456	2.8 (177) 0.76 (0.29,2.00) 0.574	5.2 (155) 1.42 (0.63,3.19) 0.400	0.626
Q82	ECG: Other Diagnoses	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	18.9 (703)	19.1 (320) 1.01 (0.72,1.41) 0.957	19.8 (177) 1.06 (0.70,1.60) 0.796	9.7 (155) 0.46 (0.26,0.81) 0.007	0.024
	Diastolic Blood Pressure	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	4.3 (703)	3.1 (320) 0.72 (0.35,1.50) 0.384	6.8 (177) 1.63 (0.82,3.26) 0.165	5.2 (155) 1.22 (0.55,2.72) 0.625	0.301
	Funduscopic Examination	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.6 (703)	0.9 (320) 1.65 (0.37,7.43) 0.764	0.6 (177) 0.99 (0.11,8.94) 0.999	0.7 (155) 1.14 (0.13,10.22) 0.999	0.922
	Carotid Bruits	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.6 (703)	1.6 (320) 2.77 (0.74,10.39) 0.228	1.1 (177) 2.00 (0.36,10.99) 0.694	0.0 (155) -- 0.900	0.236
	Radial Pulses	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.6 (694)	0.3 (317) -- --	0.0 (176) -- --	0.0 (153) -- --	--
	Femoral Pulses	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	0.7 (694)	1.9 (317) 2.66 (0.81,8.78) 0.187	2.3 (176) 3.21 (0.85,12.06) 0.175	2.0 (153) 2.76 (0.65,11.66) 0.322	0.227

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Q-83	Popliteal Pulses	12 Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	2.0 (694) 1.10 (0.44,2.74) 0.999	2.2 (317) 1.21 (0.78,1.86) 0.399	4.0 (176) 2.01 (0.80,5.06) 0.222	2.0 (153) 0.97 (0.28,3.42) 0.999	0.471
	Dorsalis Pedis Pulses	12 Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	9.4 (694) 1.21 (0.78,1.86) 0.399	11.1 (316) 1.53 (0.93,2.52) 0.097	13.6 (176) 1.46 (0.85,2.48) 0.169	13.1 (153) 1.46 (0.85,2.48) 0.169	0.295
	Posterior Tibial Pulses	12 Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	2.2 (694) 0.43 (0.12,1.51) 0.270	1.0 (316) 3.61 (1.68,7.74) 0.003	7.4 (176) 0.60 (0.14,2.65) 0.764	1.3 (153) 0.60 (0.14,2.65) 0.764	<0.001
	Leg Pulses	12 Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	11.4 (694) 1.13 (0.75,1.69) 0.560	12.7 (316) 1.80 (1.15,2.80) 0.010	18.8 (176) 1.38 (0.83,2.27) 0.211	15.0 (153) 1.38 (0.83,2.27) 0.211	0.077
	Peripheral Pulses	12 Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	11.8 (694) 1.08 (0.72,1.62) 0.703	12.7 (316) 1.72 (1.11,2.68) 0.016	18.8 (176) 1.32 (0.80,2.18) 0.276	15.0 (153) 1.32 (0.80,2.18) 0.276	0.113
	All Pulses	12 Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	12.0 (694) 1.10 (0.74,1.64) 0.649	13.0 (316) 1.70 (1.09,2.64) 0.019	18.8 (176) 1.30 (0.79,2.15) 0.300	15.0 (153) 1.30 (0.79,2.15) 0.300	0.133
	Red Blood Cell Count	13 Pct. Abn. Low (n): Est. RR (95% C.I.): p-Value:	3.6 (783) 0.97 (0.49,1.93) 0.935	3.5 (345) 0.56 (0.20,1.63) 0.290	2.1 (195) 0.89 (0.36,2.19) 0.806	3.2 (187) 0.89 (0.36,2.19) 0.806	0.725
	Hematocrit	13 Pct. Abn. Low (n): Est. RR (95% C.I.): p-Value:	2.0 (783) 0.70 (0.26,1.94) 0.498	1.5 (345) 1.26 (0.46,3.49) 0.654	2.6 (195) 0.52 (0.12,2.27) 0.384	1.1 (187) 0.52 (0.12,2.27) 0.384	0.634

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Mean Corpuscular Volume	13	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	9.8 (783)	8.7 (345) 0.87 (0.56,1.36) 0.548	15.9 (195) 1.73 (1.10,2.72) 0.017	9.6 (187) 0.98 (0.57,1.68) 0.931	0.070
Mean Corpuscular Hemoglobin	13	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	6.8 (783)	7.3 (345) 1.08 (0.66,1.76) 0.771	9.2 (195) 1.40 (0.80,2.45) 0.238	7.5 (187) 1.11 (0.60,2.06) 0.728	0.719
Platelet Count	13	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	1.2 (783)	2.3 (345) 2.04 (0.78,5.34) 0.145	2.6 (195) 2.26 (0.75,6.83) 0.147	3.2 (187) 2.85 (1.00,8.11) 0.050	0.181
Prothrombin Time	13	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	4.7 (785)	3.5 (345) 0.73 (0.38,1.41) 0.350	1.5 (195) 0.32 (0.10,1.04) 0.057	4.3 (186) 0.91 (0.42,1.99) 0.810	0.153
Kidney Disease	14	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	9.2 (758)	10.2 (333) 1.12 (0.73,1.72) 0.614	8.5 (189) 0.91 (0.52,1.60) 0.742	10.4 (183) 1.14 (0.67,1.94) 0.634	0.883
Urinary Protein	14	Pct. Present (n): Est. RR (95% C.I.): p-Value:	5.0 (786)	4.1 (345) 0.81 (0.43,1.51) 0.509	4.1 (196) 0.82 (0.37,1.77) 0.606	4.3 (187) 0.86 (0.39,1.86) 0.695	0.889
Urinary Occult Blood	14	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	7.8 (786)	7.0 (345) 0.89 (0.54,1.45) 0.637	10.7 (196) 1.43 (0.85,2.41) 0.183	8.6 (187) 1.11 (0.63,1.98) 0.717	0.484
Urinary White Blood Cell Count	14	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	6.4 (786)	5.2 (345) 0.81 (0.47,1.41) 0.457	6.6 (196) 1.05 (0.56,1.97) 0.890	8.0 (187) 1.28 (0.70,2.34) 0.415	0.653

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Current Thyroid Function	15	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	3.8 (786)	4.4 (344) 1.15 (0.61,2.16) 0.667	3.6 (196) 0.93 (0.40,2.16) 0.872	3.2 (185) 0.84 (0.35,2.06) 0.711	0.925
History of Thyroid Disease	15	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	5.0 (783)	5.6 (342) 1.12 (0.64,1.97) 0.689	3.1 (194) 0.61 (0.25,1.46) 0.266	3.8 (185) 0.75 (0.33,1.71) 0.493	0.513
Thyroid Gland	15	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	27.7 (780)	26.2 (340) 0.93 (0.69,1.24) 0.600	30.1 (196) 1.12 (0.80,1.58) 0.503	24.0 (183) 0.83 (0.57,1.20) 0.318	0.565
Testes	15	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	2.9 (785)	2.6 (343) 0.89 (0.41,1.95) 0.776	2.1 (193) 0.70 (0.24,2.05) 0.517	5.3 (187) 1.87 (0.88,4.00) 0.106	0.296
T ₃ % Uptake	15	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	3.9 (772)	4.4 (338) 1.15 (0.61,2.16) 0.668	3.6 (194) 0.93 (0.40,2.14) 0.857	1.7 (181) 0.42 (0.13,1.38) 0.152	0.359
TSH	15	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	1.8 (772)	2.7 (338) 1.48 (0.63,3.46) 0.364	1.5 (194) 0.85 (0.24,2.99) 0.801	3.3 (181) 1.86 (0.70,4.90) 0.212	0.531
Testosterone	15	Pct. Abn. Low (n): Est. RR (95% C.I.): p-Value:	1.7 (785)	0.9 (343) 0.52 (0.15,1.85) 0.315	1.6 (193) 0.94 (0.26,3.32) 0.921	2.1 (187) 1.30 (0.42,4.03) 0.652	0.649
Fasting Glucose	15	Pct. Abn. High (n): Est. RR (95% C.I.): p-Value:	11.4 (779)	7.9 (341) 0.67 (0.42,1.05) 0.078	12.4 (193) 1.10 (0.68,1.78) 0.695	19.9 (186) 1.93 (1.26,2.94) 0.002	0.001

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Composite Diabetes Indicator	15	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	8.2 (782)	5.5 (344) 0.66 (0.39,1.11) 0.118	8.3 (193) 1.01 (0.57,1.80) 0.962	16.6 (187) 2.23 (1.40,3.54) 0.001	<0.001
Composite Skin Test Diagnosis	16	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	4.6 (605)	7.1 (269) 1.57 (0.86,2.86) 0.143	7.8 (153) 1.75 (0.87,3.53) 0.116	5.7 (141) 1.24 (0.55,2.78) 0.603	0.331
Asthma	17	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.5 (778)	3.5 (340) 2.34 (1.04,5.25) 0.040	2.1 (194) 1.34 (0.43,4.21) 0.612	2.7 (185) 1.77 (0.62,5.10) 0.288	0.228
Bronchitis	17	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	13.1 (762)	16.2 (333) 1.28 (0.89,1.84) 0.176	13.6 (191) 1.04 (0.66,1.66) 0.858	11.5 (183) 0.86 (0.52,1.42) 0.549	0.437
Pleurisy	17	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	3.9 (780)	3.2 (341) 0.83 (0.41,1.68) 0.611	1.6 (194) 0.39 (0.12,1.30) 0.126	4.8 (186) 1.27 (0.59,2.73) 0.537	0.263
Pneumonia	17	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	9.3 (752)	8.3 (324) 0.89 (0.56,1.41) 0.609	7.6 (184) 0.80 (0.44,1.46) 0.470	7.1 (182) 0.75 (0.41,1.39) 0.358	0.740
Tuberculosis	17	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	3.2 (782)	3.5 (344) 1.09 (0.54,2.20) 0.801	2.1 (194) 0.64 (0.22,1.85) 0.408	1.6 (185) 0.50 (0.15,1.67) 0.260	0.486

TABLE Q-6. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
Thorax and Lung Abnormalities	17	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	5.5 (786)	5.8 (345) 1.06 (0.62,1.84) 0.826	8.7 (196) 1.64 (0.91,2.94) 0.097	8.0 (187) 1.51 (0.82,2.78) 0.188	0.301
Hyperresonance	17	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	3.1 (786)	3.2 (345) 1.05 (0.51,2.16) 0.904	3.1 (196) 1.00 (0.40,2.49) 0.995	4.3 (187) 1.42 (0.63,3.21) 0.401	0.874
Dullness	17	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	0.1 (786)	0.0 (345) -- --	0.5 (196) -- --	0.5 (187) -- --	--
Wheezes	17	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.9 (786)	3.5 (345) 1.85 (0.86,4.00) 0.117	3.1 (196) 1.62 (0.62,4.24) 0.323	3.7 (187) 2.00 (0.80,4.97) 0.137	0.310
Rales	17	Pct. Yes (n): Est. RR (95% C.I.): p-Value:	1.7 (786)	1.2 (345) 0.70 (0.23,2.15) 0.531	1.0 (196) 0.61 (0.14,2.74) 0.522	2.7 (187) 1.63 (0.58,4.64) 0.357	0.551
X-Ray Interpretation	17	Pct. Abn. (n): Est. RR (95% C.I.): p-Value:	4.7 (784)	4.7 (343) 0.99 (0.54,1.80) 0.968	4.6 (196) 0.97 (0.46,2.05) 0.940	4.8 (186) 1.03 (0.49,2.17) 0.945	0.999

--: Estimated relative risk/confidence interval/p-value not given due to the sparse number of abnormalities.

Note: RR=Relative risk; risk is relative to background current dioxin category.

Background (Comparisons): Current Dioxin \leq 10 ppt.

Unknown (Ranch Hands): Current Dioxin \leq 10 ppt.

Low (Ranch Hands): 15 ppt < Current Dioxin \leq 33.3 ppt.

High (Ranch Hands): Current Dioxin $>$ 33.3 ppt.

TABLE Q-7.
Summary of Unadjusted Results for Polychotomous Variables
Model 1: Ranch Hands - Initial Dioxin (Categorized)

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption		
		Initial Dioxin Contrast	Est. Relative Risk (95% C.I.)	p-Value	Initial Dioxin Contrast	Est. Relative Risk (95% C.I.)	p-Value
White Blood Cell Count	13	Overall [†]		0.424	Overall [†]		0.328
		M vs. L ^a	0.71 (0.26,1.92)	0.500	M vs. L ^a	0.63 (0.29,1.36)	0.239
		H vs. L ^a	0.96 (0.33,2.81)	0.938	H vs. L ^a	0.85 (0.35,2.06)	0.727
		M vs. L ^b	1.16 (0.44,3.10)	0.766	M vs. L ^b	1.23 (0.58,2.60)	0.584
		H vs. L ^b	0.32 (0.06,1.61)	0.167	H vs. L ^b	0.34 (0.08,1.52)	0.158
Hemoglobin	13	Overall [†]		0.703	Overall [†]		0.778
		M vs. L ^a	1.01 (0.34,3.00)	0.983	M vs. L ^a	0.96 (0.42,2.20)	0.928
		H vs. L ^a	0.80 (0.21,3.00)	0.739	H vs. L ^a	0.76 (0.24,2.34)	0.627
		M vs. L ^b	--	--	M vs. L ^b	2.70 (0.49,14.83)	0.254
		H vs. L ^b	--	--	H vs. L ^b	1.32 (0.12,14.73)	0.820
FSH	15	Overall [†]		0.144	Overall [†]		0.765
		M vs. L ^a	--	--	M vs. L ^a	1.10 (0.33,3.61)	0.876
		H vs. L ^a	--	--	H vs. L ^a	1.30 (0.32,5.17)	0.714
		M vs. L ^b	0.79 (0.43,1.45)	0.445	M vs. L ^b	0.90 (0.55,1.45)	0.654
		H vs. L ^b	0.57 (0.27,1.21)	0.143	H vs. L ^b	0.65 (0.34,1.28)	0.215
2-Hour Postprandial Glucose	15	Overall [†]		0.174	Overall [†]		0.243
		M vs. L ^c	1.10 (0.62,1.96)	0.749	M vs. L ^c	1.32 (0.85,2.07)	0.219
		H vs. L ^c	0.81 (0.40,1.63)	0.554	H vs. L ^c	0.99 (0.54,1.80)	0.963
		M vs. L ^d	3.15 (0.37,26.54)	0.291	M vs. L ^d	1.26 (0.42,3.82)	0.677
		H vs. L ^d	7.00 (0.85,58.00)	0.071	H vs. L ^d	2.85 (0.97,8.33)	0.056

TABLE Q-7. (Continued)

Summary of Unadjusted Results for Polychotomous Variables
Model 1: Ranch Hands - Initial Dioxin (Categorized)

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption		
		Initial Dioxin Contrast	Est. Relative Risk (95% C.I.)	p-Value	Initial Dioxin Contrast	Est. Relative Risk (95% C.I.)	p-Value
Loss of Vital Capacity	17	Overall [†]		0.164	Overall [†]		0.051
		M vs. L ^e	1.57 (0.72,3.45)	0.256	M vs. L ^e	1.91 (1.06,3.44)	0.031
		H vs. L ^e	1.72 (0.73,4.10)	0.217	H vs. L ^e	2.03 (1.01,4.06)	0.046
		M vs. L ^f	0.13 (0.01,1.14)	0.066	M vs. L ^f	0.20 (0.02,1.62)	0.130
		H vs. L ^f	0.78 (0.17,3.54)	0.743	H vs. L ^f	1.22 (0.31,4.80)	0.778
Obstructive Abnormality	17	Overall [†]		0.018	Overall [†]		0.016
		M vs. L ^e	0.96 (0.59,1.56)	0.875	M vs. L ^e	0.96 (0.66,1.39)	0.820
		H vs. L ^e	0.47 (0.25,0.88)	0.019	H vs. L ^e	0.46 (0.27,0.78)	0.005
		M vs. L ^f	2.38 (0.67,8.49)	0.181	M vs. L ^f	1.34 (0.62,2.87)	0.459
		H vs. L ^f	0.56 (0.09,3.45)	0.535	H vs. L ^f	0.32 (0.07,1.41)	0.132

^aAbnormal low contrasted with normal.^bAbnormal high contrasted with normal.^cImpaired contrasted with normal.^dDiabetic contrasted with normal.^eMild contrasted with none.^fModerate/severe contrasted with none.[†]Overall test of independence of initial dioxin and clinical parameter.

--: Estimated relative risk, confidence interval, and p-value not given due to the sparse number of abnormalities.

Note: Minimal--Low: 52-93 ppt; Medium: >93-292 ppt; High: >292 ppt.Maximal--Low: 25-93 ppt; Medium: >93-292 ppt; High: >292 ppt.

M vs. L: Medium initial dioxin category versus low initial dioxin category.

H vs. L: High initial dioxin category versus low initial dioxin category.

TABLE Q-8.
Summary of Unadjusted Results for Polychotomous Variables
Model 2: Ranch Hands - Current Dioxin (Categorized) and Time

Clinical Parameter	Reference Chapter	Time (Yrs.)	Minimal Assumption			Maximal Assumption			
			Current Dioxin Contrast	Est. Relative Risk (95% C.I.)	p-Value	Time (Yrs.)	Current Dioxin Contrast	Est. Relative Risk (95% C.I.)	p-Value
White Blood Cell Count	13	≤ 18.6	C-by-T*		0.179	≤ 18.6	C-by-T*		0.712
			Overall†		0.330		Overall†		0.631
			M vs. L ^a	1.18 (0.29,4.89)	0.816		M vs. L ^a	0.77 (0.28,2.12)	0.619
			H vs. L ^a	2.37 (0.54,10.36)	0.253		H vs. L ^a	1.55 (0.52,4.60)	0.433
			M vs. L ^b	4.13 (0.50,34.27)	0.189		M vs. L ^b	1.36 (0.48,3.84)	0.567
	Q ₉₀		H vs. L ^b	1.42 (0.09,23.29)	0.806		H vs. L ^a	0.47 (0.06,3.82)	0.477
	>18.6	Overall†		0.166	>18.6	Overall†		0.320	
		M vs. L ^a	0.41 (0.10,1.70)	0.218		M vs. L ^a	0.51 (0.15,1.69)	0.269	
		H vs. L ^a	0.33 (0.06,1.88)	0.212		H vs. L ^a	0.41 (0.09,1.95)	0.264	
		M vs. L ^b	0.57 (0.17,1.89)	0.360		M vs. L ^b	1.14 (0.39,3.35)	0.810	
		H vs. L ^b	0.13 (0.02,1.17)	0.069		H vs. L ^b	0.26 (0.03,2.19)	0.218	
Hemoglobin	13	≤ 18.6	C-by-T*		0.136	≤ 18.6	C-by-T*		0.006
			Overall†		0.116		Overall†		0.012
			M vs. L ^a	--	--		M vs. L ^a	--	--
			H vs. L ^a	0.46 (0.05,4.19)	0.493		H vs. L ^a	0.39 (0.05,2.83)	0.349
			M vs. L ^b	--	--		M vs. L ^b	--	--
	Q ₉₀		H vs. L ^b	--	--		H vs. L ^a	--	--
	>18.6	Overall†		0.743	>18.6	Overall†		0.553	
		M vs. L ^a	2.02 (0.44,9.38)	0.367		M vs. L ^a	2.72 (0.83,8.94)	0.100	
		H vs. L ^a	1.52 (0.28,8.29)	0.630		H vs. L ^a	2.05 (0.51,8.27)	0.315	
		M vs. L ^b	--	--		M vs. L ^b	1.23 (0.18,8.41)	0.836	

TABLE Q-8. (Continued)
Summary of Unadjusted Results for Polychotomous Variables
Model 2: Ranch Hands - Current Dioxin (Categorized) and Time

Clinical Parameter	Reference Chapter	Time (Yrs.)	Minimal Assumption			Maximal Assumption			
			Current Dioxin Contrast	Est. Relative Risk (95% C.I.)	p-Value	Time (Yrs.)	Current Dioxin Contrast	Est. Relative Risk (95% C.I.)	p-Value
FSH	15	≤ 18.6	C-by-T*		0.685	≤ 18.6	C-by-T*		0.053
			Overall†		0.144		Overall†		0.191
			M vs. L ^a	--	--		M vs. L ^a	1.09 (0.24,4.86)	0.910
			H vs. L ^a	--	--		H vs. L ^a	1.70 (0.31,9.26)	0.538
			M vs. L ^b	0.66 (0.27,1.63)	0.367		M vs. L ^b	0.56 (0.28,1.13)	0.108
	Q161		H vs. L ^b	0.39 (0.11,1.39)	0.147		H vs. L ^a	0.33 (0.10,1.11)	0.074
	> 18.6	Overall†		0.649	> 18.6	Overall†		0.344	
		M vs. L ^a	--	--		M vs. L ^a	1.28 (0.19,8.80)	0.803	
		H vs. L ^a	--	--		H vs. L ^a	1.09 (0.11,11.21)	0.940	
		M vs. L ^b	1.47 (0.61,3.55)	0.389		M vs. L ^b	2.16 (1.04,4.47)	0.039	
2-Hour Postprandial Glucose	15	≤ 18.6	Overall†		0.297	≤ 18.6	Overall†		0.251
			C-by-T*		0.444		C-by-T*		0.781
			M vs. L ^c	1.36 (0.53,3.49)	0.519		M vs. L ^c	1.14 (0.58,2.23)	0.700
			H vs. L ^c	0.94 (0.28,3.16)	0.915		H vs. L ^c	0.78 (0.28,2.18)	0.641
			M vs. L ^d	1.12 (0.10,12.66)	0.925		M vs. L ^d	1.07 (0.18,6.55)	0.938
	Q161		H vs. L ^d	5.24 (0.56,48.61)	0.145		H vs. L ^d	5.02 (1.08,23.32)	0.039
	> 18.6	Overall†		0.105	> 18.6	Overall†		0.658	
		M vs. L ^c	0.44 (0.21,0.92)	0.029		M vs. L ^c	0.88 (0.47,1.64)	0.690	
		H vs. L ^c	0.47 (0.20,1.08)	0.074		H vs. L ^c	0.94 (0.45,1.96)	0.866	
		M vs. L ^d	0.72 (0.06,8.18)	0.789		M vs. L ^d	0.46 (0.09,2.45)	0.365	
		H vs. L ^d	2.59 (0.28,24.18)	0.406		H vs. L ^d	1.68 (0.43,6.51)	0.456	

TABLE Q-8. (Continued)
Summary of Unadjusted Results for Polychotomous Variables
Model 2: Ranch Hands - Current Dioxin (Categorized) and Time

Clinical Parameter	Reference Chapter	Time (Yrs.)	Minimal Assumption			Maximal Assumption		
			Current Dioxin Contrast	Est. Relative Risk (95% C.I.)	p-Value	Time (Yrs.)	Current Dioxin Contrast	Est. Relative Risk (95% C.I.)
Loss of Vital Capacity	17	≤ 18.6	C-by-T*		0.512	≤ 18.6	C-by-T*	
			Overall†		0.334		Overall†	
			M vs. L ^e	1.26 (0.37,4.25)	0.712		M vs. L ^e	1.40 (0.55,3.56)
			H vs. L ^e	2.57 (0.71,9.29)	0.150		H vs. L ^e	2.87 (1.03,7.94)
			M vs. L ^f	0.28 (0.02,3.14)	0.302		M vs. L ^f	0.39 (0.04,3.53)
	Q-92	> 18.6	H vs. L ^f	1.47 (0.20,10.89)	0.704		H vs. L ^f	2.05 (0.36,11.57)
			Overall†		0.866		Overall†	
			M vs. L ^e	0.69 (0.28,1.68)	0.415		M vs. L ^e	1.09 (0.52,2.30)
			H vs. L ^e	0.63 (0.23,1.74)	0.372		H vs. L ^e	0.99 (0.40,2.43)
			M vs. L ^f	0.41 (0.03,6.74)	0.535		M vs. L ^f	0.58 (0.05,6.51)
Obstructive Abnormality	17	≤ 18.6	C-by-T*		0.844	≤ 18.6	C-by-T*	
			Overall†		0.327		Overall†	
			M vs. L ^e	0.78 (0.40,1.53)	0.468		M vs. L ^e	0.78 (0.46,1.33)
			H vs. L ^e	0.49 (0.19,1.22)	0.124		H vs. L ^e	0.49 (0.22,1.11)
			M vs. L ^f	3.29 (0.39,28.04)	0.277		M vs. L ^f	1.26 (0.41,3.88)
	Q-92	> 18.6	H vs. L ^f	1.15 (0.07,18.96)	0.921		H vs. L ^f	0.44 (0.05,3.71)
			Overall†		0.083		Overall†	
			M vs. L ^e	0.74 (0.37,1.47)	0.386		M vs. L ^e	0.77 (0.45,1.31)
			H vs. L ^e	0.38 (0.17,0.89)	0.025		H vs. L ^e	0.40 (0.20,0.82)
			M vs. L ^f	0.94 (0.23,3.83)	0.929		M vs. L ^f	0.94 (0.33,2.70)

TABLE Q-8. (Continued)

**Summary of Unadjusted Results for Polychotomous Variables
Model 2: Ranch Hands - Current Dioxin (Categorized) and Time**

^aAbnormal low contrasted with normal.

^bAbnormal high contrasted with normal.

^cImpaired contrasted with normal.

^dDiabetic contrasted with normal.

^eMild contrasted with none.

^fModerate/severe contrasted with none.

*Test of significance of current dioxin-by-time interaction.

†Overall test of independence of current dioxin and the clinical parameter within time stratum.

--: Estimated relative risk, confidence interval, and p-value not given due to the sparse number of abnormalities.

Note: Minimal--Low: >10-14.65 ppt; Medium: >14.65-45.75 ppt; High: >45.75 ppt.

Maximal--Low: >5-14.65 ppt; Medium: >14.65-45.75 ppt; High: >45.75 ppt.

M vs. L: Medium current dioxin category versus low current dioxin category.

H vs. L: High current dioxin category versus low current dioxin category.

TABLE Q-9.
Summary of Unadjusted Results for Polychotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
White Blood Cell Count	13	Pct. Abn. (n): ^a	7.8 (783)	6.7 (345)	4.1 (195)	4.8 (187)	0.285
		Est. RR (95% C.I.): ^a		0.84 (0.51,1.38)	0.50 (0.23,1.06)	0.58 (0.28,1.19)	
		p-Value: ^a		0.496	0.071	0.137	
	13	Pct. Abn. (n): ^b	5.9 (783)	5.5 (345)	4.6 (195)	3.2 (187)	0.576
		Est. RR (95% C.I.): ^b		0.92 (0.53,1.60)	0.74 (0.36,1.55)	0.51 (0.22,1.22)	
		p-Value: ^b		0.771	0.429	0.132	
Hemoglobin	13	Pct. Abn. (n): ^a	4.3 (783)	3.5 (345)	4.6 (195)	2.7 (187)	0.576
		Est. RR (95% C.I.): ^a		0.79 (0.40,1.55)	1.08 (0.51,2.28)	0.60 (0.23,1.56)	
		p-Value: ^a		0.491	0.849	0.294	
	13	Pct. Abn. (n): ^b	1.2 (783)	0.6 (345)	2.1 (195)	0.5 (187)	0.455
		Est. RR (95% C.I.): ^b		0.50 (0.11,2.31)	1.80 (0.55,5.92)	0.45 (0.06,3.61)	
		p-Value: ^b		0.372	0.331	0.455	
FSH	15	Pct. Abn. (n): ^a	1.9 (786)	2.0 (345)	2.0 (196)	2.1 (187)	0.912
		Est. RR (95% C.I.): ^a		1.10 (0.45,2.70)	1.13 (0.37,3.41)	1.15 (0.38,3.48)	
		p-Value: ^a		0.840	0.829	0.803	
	15	Pct. Abn. (n): ^b	10.2 (786)	12.2 (345)	13.3 (196)	10.7 (187)	0.821
		Est. RR (95% C.I.): ^b		1.23 (0.82,1.83)	1.36 (0.84,2.18)	1.06 (0.63,1.79)	
		p-Value: ^b		0.319	0.210	0.821	
2-Hour Postprandial Glucose	15	Pct. Abn. (n): ^c	14.6 (740)	14.5 (331)	15.6 (179)	15.7 (166)	0.174
		Est. RR (95% C.I.): ^c		0.98 (0.68,1.41)	1.06 (0.37,1.67)	1.13 (0.71,1.80)	
		p-Value: ^c		0.907	0.795	0.610	

TABLE Q-9. (Continued)
Summary of Unadjusted Results for Polychotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Statistic	Current Dioxin Category				Overall p-Value
			Background	Unknown	Low	High	
2-Hour Postprandial Glucose (Continued)	15	Pct. Abn. (n): ^d	3.0 (740)	1.8 (331)	1.1 (179)	6.0 (166)	0.169
		Est. RR (95% C.I.): ^d		0.60 (0.24,1.50)	0.37 (0.09,1.60)	2.14 (0.99,4.62)	
		p-Value: ^d		0.275	0.185	0.053	
Loss of Vital Capacity	17	Pct. Abn. (n): ^e	8.1 (786)	5.2 (344)	9.2 (196)	11.2 (187)	0.169
		Est. RR (95% C.I.): ^e		0.63 (0.37,1.08)	1.14 (0.66,1.97)	1.44 (0.85,2.41)	
		p-Value: ^e		0.093	0.639	0.172	
Obstructive Abnormality	17	Pct. Abn. (n): ^f	1.2 (786)	2.3 (344)	1.0 (196)	1.6 (187)	0.002
		Est. RR (95% C.I.): ^f		1.99 (0.76,5.21)	0.90 (0.19,4.20)	1.46 (0.39,5.47)	
		p-Value: ^f		0.160	0.895	0.574	
		Pct. Abn. (n): ^e	21.4 (786)	28.8 (344)	24.5 (196)	15.5 (187)	0.002
		Est. RR (95% C.I.): ^e		1.50 (1.12,2.01)	1.22 (0.84,1.77)	0.65 (0.42,1.00)	
		p-Value: ^e		0.006	0.288	0.050	
		Pct. Abn. (n): ^f	4.6 (786)	4.9 (344)	6.1 (196)	1.6 (187)	0.002
		Est. RR (95% C.I.): ^f		1.20 (0.66,2.19)	1.42 (0.72,2.81)	0.31 (0.10,1.03)	
		p-Value: ^f		0.541	0.307	0.056	

^aPercent abnormally low; abnormal low contrasted with normal.

^bPercent abnormally high; abnormal high contrasted with normal.

^cPercent impaired; impaired contrasted with normal.

^dPercent diabetic; diabetic contrasted with normal.

^ePercent mild; mild contrasted with none.

^fPercent moderate/severe; moderate/severe contrasted with none.

Note: RR=Relative risk; risk is relative to background current dioxin category.

Background (Comparisons): Current Dioxin \leq 10 ppt.

Unknown (Ranch Hands): Current Dioxin \leq 10 ppt.

Low (Ranch Hands): 15 ppt < Current Dioxin \leq 33.3 ppt.

High (Ranch Hands): Current Dioxin $>$ 33.3 ppt.

TABLE Q-10.
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption		
		R ²	Adj. Slope	p-Value	R ²	Adj. Slope	p-Value
Percent Body Fat	6	0.037	0.648	0.001	0.051	0.859	<0.001
Sedimentation Rate ^a	6	0.074	0.099	0.002	0.072	0.108	<0.001
Average Sleep Each Night	9	0.037	-0.006	0.890	0.028	-0.018	0.535
MCMI: Basic Personality Patterns							
Schizoid Score ^a	9	0.037	0.068	0.002	0.046	0.051	0.002
Avoidant Score ^b	9	0.097	0.086**	0.003**	0.066	0.046	0.038
Dependent Score ^c	9	0.049	0.137	0.018	0.043	0.091	0.037
Histrionic Score ^d	9	0.089	-166.6	0.011	0.074	-105.1	0.037
Narcissistic Score	9	0.040	-1.051	0.053	0.048	-1.082	0.012
Antisocial Score	9	0.039	-0.860**	0.238**	0.021	****	****
Compulsive Score ^d	9	0.080	1.385	0.976	0.071	18.043	0.580
Passive-Aggressive Score ^c	9	0.080	0.004	0.950	0.096	0.050	0.295
MCMI: Pathological Personality Disorders							
Schizotypal Score	9	0.062	2.448	<0.001	0.050	1.681	0.001
Borderline Score	9	0.033	0.611	0.333	0.046	0.405**	0.388**
Paranoid Score	9	0.021	0.457	0.413	0.016	-0.021	0.960
MCMI: Clinical Symptom Syndromes							
Anxiety Score	9	0.027	1.337**	0.091**	0.043	****	****
Somatoform Score	9	0.017	0.811	0.196	0.022	1.199	0.011
Hypomania Score ^c	9	0.052	-0.186**	0.069**	0.045	-0.090**	0.236**
Dysthymia Score	9	0.022	****	****	0.016	****	****
Alcohol Abuse Score	9	0.036	-0.061	0.921	0.045	-0.357	0.440
Drug Abuse Score	9	0.045	-0.670	0.373	0.044	-0.220	0.692
Psychotic Thinking Score	9	0.096	2.343	0.001	0.072	1.266	0.021
Psychotic Depression Score	9	0.082	1.567	0.035	0.070	0.963	0.081
Psychotic Delusion Score	9	0.029	0.774	0.282	0.039	0.508	0.368

TABLE Q-10. (Continued)

Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption		
		R ²	Adj. Slope	p-Value	R ²	Adj. Slope	p-Value
AST ^a	10	0.122	-0.0033**	0.767**	0.126	0.0076	0.369
ALT ^a	10	0.088	0.0239	0.190	0.094	0.0379**	0.005**
GGT ^a	10	0.096	0.0232	0.338	0.121	0.0636	<0.001
Alkaline Phosphatase ^a	10	0.020	0.0049	0.554	0.036	0.0138	0.030
D-Glucaric Acid ^c	10	0.018	0.0379**	0.580**	0.028	0.0564	0.270
Total Bilirubin ^a	10	<0.001	-0.0009	0.934	0.008	-0.0016**	0.840**
Direct Bilirubin ^e	10	0.012	0.0165	0.317	0.027	0.0255	0.038
LDH ^a	10	0.031	-0.0024	0.687	0.023	0.0008	0.864
Cholesterol ^a	10	0.041	0.0133	0.046	0.030	0.0102	0.041
HDL ^a	10	0.086	-0.0115	0.218	0.105	-0.0231**	<0.001**
Cholesterol-HDL Ratio ^a	10	0.066	0.0263	0.009	0.063	0.0350***	<0.001***
Triglycerides ^a	10	0.031	0.0487	0.040	0.055	0.0762	<0.001
Creatine Kinase ^a	10	0.111	-0.0038**	0.824**	0.090	-0.0046**	0.706**
Systolic Blood Pressure	12	0.087	0.144***	0.836***	0.087	0.376**	0.444**
Systolic Blood Pressure ^f	12	0.028	0.614**	0.382**	0.039	0.964**	0.049**
Diastolic Blood Pressure	12	0.068	0.119	0.748	0.069	****	****
Red Blood Cell Count	13	0.010	0.0034	0.808	0.039	0.0162	0.103
White Blood Cell Count ^a	13	0.306	****	****	0.309	****	****
Hemoglobin	13	0.062	0.0387	0.316	0.078	0.0426	0.120
Hematocrit	13	0.063	0.1091	0.324	0.081	0.1278	0.105
Mean Corpuscular Volume	13	0.105	0.1630**	0.363**	0.087	0.0303	0.807
Mean Corpuscular Hemoglobin	13	0.105	0.0491**	0.449**	0.087	-0.0034	0.941
Mean Corpuscular Hemoglobin Concentration	13	0.060	-0.0117**	0.559**	0.058	-0.0149	0.306
Platelet Count	13	0.056	1.111	0.603	0.045	2.020	0.181
Prothrombin Time ^a	13	0.108	0.0032**	0.041**	0.071	0.0012	0.287
Blood Urea Nitrogen ^a	14	0.039	-0.021	0.209	0.046	-0.017	0.154

TABLE Q-10. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption		
		R ²	Adj. Slope	p-Value	R ²	Adj. Slope	p-Value
Urine Specific Gravity	14	0.012	<0.0001	0.835	0.019	0.0001**	0.524**
T ₃ % Uptake ^a	15	0.036	-0.0064	0.034	0.026	-0.0067	0.003
TSH ^g	15	0.028	-0.0070	0.827	0.021	0.0035	0.886
FSH ^a	15	0.087	0.0122	0.642	0.084	0.0172	0.372
Testosterone ^c	15	0.260	-0.1127***	0.329***	0.239	-0.1027***	0.237***
Testosterone ^{c,h}	15	0.125	-0.2828**	0.023**	0.125	-0.3055**	<0.001**
Fasting Glucose ^a	15	0.095	0.0262	<0.001	0.106	0.0216	<0.001
2-Hour Postprandial Glucose ^a	15	0.111	0.0169**	0.114**	0.105	0.0118	0.135
2-Hour Postprandial Glucose ^{a,h}	15	0.039	0.0254**	0.020**	0.039	0.0235	0.003
CD2 Cells ^a	16	0.125	****	****	0.110	0.002	0.874
CD4 Cells ^a	16	0.126	0.002	0.936	0.155	0.018	0.324
CD8 Cells ^a	16	0.142	****	****	0.076	-0.014**	0.518**
CD20 Cells ^a	16	0.516	0.075**	0.086**	0.465	0.025	0.363
CD14 Cells ^a	16	0.728	****	****	0.596	-0.012	0.728
CD25 Cells ^a	16	0.819	****	****	0.735	****	****
HLA-DR Cells ^a	16	0.674	****	****	0.644	0.002**	0.943**
CD4/CD8 Ratio ^a	16	0.649	0.028	0.397	0.578	0.042	0.074
TLC ^a	16	0.140	-0.005**	0.812**	0.116	0.001	0.957
Unstimulated PHA Response ^a	16	0.737	0.027	0.464	0.670	0.019	0.459
PHA Net Response (Concentration 1)	16	0.857	****	****	0.819	-728**	0.742**
PHA Net Response (Concentration 2)	16	0.854	6,163	0.090	0.793	4,479	0.078

TABLE Q-10. (Continued)

Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption		
		R ²	Adj. Slope	p-Value	R ²	Adj. Slope	p-Value
PHA Net Response (Concentration 3)	16	0.828	3,760	0.252	0.726	1,824**	0.490**
PHA Net Response (Across Day and Concentration)	16	0.873	3.093**	0.326**	--	--	--
Maximum PHA Net Response	16	0.873	6,990	0.054	0.823	4,501	0.072
Unstimulated MLC Response ^a	16	0.788	0.010	0.850	0.691	0.035	0.388
MLC Net Response	16	0.743	1,549	0.649	0.696	597	0.779
NKCA 50/1 Net Response	16	0.457	0.5	0.970	0.445	-6.0	0.526
NKCA 50/1 Percent Release	16	0.144	0.293**	0.748**	0.060	-0.247	0.714
NKCI 50/1 Net Response	16	0.903	5.7	0.551	0.903	2.5	0.665
NKCI 50/1 Percent Release	16	0.722	0.8	0.345	0.728	0.4	0.421
IgA ^a	16	0.028	0.040	0.019	0.040	0.035	0.003
IgG ^a	16	0.147	0.006**	0.502**	0.143	0.008	0.156
IgM ^a	16	0.024	0.002**	0.902**	0.026	-0.015	0.268
FVC (% of predicted)	17	0.090	-0.992**	0.028**	0.124	-1.403	<0.001
FEV ₁ (% of predicted)	17	0.114	-0.532**	0.304**	0.151	-0.842	0.026
FEFmax (% of predicted)	17	0.081	-0.805	0.341	0.099	-1.507	0.014
Ratio of Observed FEV ₁ to Observed FVC ⁱ	17	0.112	-0.028	0.022	0.143	-0.030	<0.001

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TABLE Q-10. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

^aAnalysis performed on natural logarithm scale; slope based on natural logarithm of clinical parameter versus log₂ (initial dioxin).

^bAnalysis performed on natural logarithm (X + 1.0) scale; slope based on natural logarithm (avoidant score + 1.0) versus log₂ (initial dioxin).

^cAnalysis performed on square root scale; slope based on square root of clinical parameter versus log₂ (initial dioxin).

^dAnalysis performed on square scale; slope based on square of clinical parameter versus log₂ (initial dioxin).

^eAnalysis performed on natural logarithm (X + 0.1) scale; slope based on natural logarithm (direct bilirubin + 0.1) versus log₂ (initial dioxin).

^fAnalysis performed on model excluding percent body fat and cholesterol.

^gAnalysis performed on natural logarithm (X - 0.4) scale; slope based on natural logarithm (TSH - 0.4) of clinical parameter versus log₂ (initial dioxin).

^hAnalysis performed on model excluding percent body fat.

ⁱAnalysis performed on natural logarithm (1 - X) scale; slope based on natural logarithm (1 - ratio of observed FEV₁ to observed FVC) versus log₂ (initial dioxin).

--: Analysis not performed.

**Log₂ (initial dioxin)-by-covariate interaction ($0.01 < p \leq 0.05$); adjusted slope and p-value derived from a model fitted after deletion of this interaction.

***Log₂ (initial dioxin)-by-covariate interaction ($p \leq 0.01$); adjusted slope and p-value derived from a model fitted after deletion of this interaction.

****Log₂ (initial dioxin)-by-covariate interaction ($p \leq 0.01$); adjusted slope and p-value not presented.

Note: Statistics are based on the relationship between clinical parameter and log₂ (initial dioxin) unless otherwise specified.

TABLE Q-11.
Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value
Percent Body Fat	6	0.037	0.775	≤18.6 >18.6	0.596 0.713	0.071 0.008	0.053	0.431	≤18.6 >18.6	0.999 0.777	<0.001 <0.001
Sedimentation Rate ^b	6	0.110	0.634	≤18.6 >18.6	0.062 0.093	0.221 0.026	0.083	0.309	≤18.6 >18.6	0.075 0.122	0.031 <0.001
Average Sleep Each Night	9	0.056	****	≤18.6 >18.6	**** ****	**** ****	0.038	0.400**	≤18.6 >18.6	-0.056** -0.007**	0.212** 0.869**
MCMI: Basic Personality Patterns											
Schizoid Score ^b	9	0.049	0.074	≤18.6 >18.6	0.015 0.094	0.662 0.001	0.051	0.044**	≤18.6 >18.6	0.012** 0.077**	0.615** <0.001**
Avoidant Score ^c	9	0.098	0.029	≤18.6 >18.6	0.003 0.133	0.951 <0.001	0.073	0.045	≤18.6 >18.6	-0.006 0.081	0.848 0.006
Dependent Score ^d	9	0.051	0.477	≤18.6 >18.6	0.097 0.179	0.300 0.020	0.045	0.347	≤18.6 >18.6	0.051 0.131	0.443 0.026
Histrionic Score ^e	9	0.094	0.112	≤18.6 >18.6	-32.0 -24.6	0.760 0.006	0.099	****	≤18.6 >18.6	**** ****	**** ****
Narcissistic Score	9	0.049	0.223	≤18.6 >18.6	0.056 -1.307	0.948 0.069	0.055	0.080	≤18.6 >18.6	-0.055 -1.517	0.933 0.009
Antisocial Score	9	0.025	0.407	≤18.6 >18.6	0.428 -0.771	0.709 0.418	0.013	0.380	≤18.6 >18.6	0.162 -0.765	0.841 0.286

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TABLE Q-11. (Continued)

Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value
Compulsive Score ^e	9	0.089	0.476	≤18.6 >18.6	65.987 0.742	0.366 0.990	0.071	0.963	≤18.6 >18.6	16.780 13.836	0.734 0.752
Passive-Aggressive Score ^d	9	0.082	0.324	≤18.6 >18.6	-0.089 0.042	0.401 0.630	0.096	0.823	≤18.6 >18.6	0.033 0.054	0.646 0.399
Q-102											
MCMI: Pathological Personality Disorders											
Schizotypal Score	9	0.064	0.296	≤18.6 >18.6	1.397 2.855	0.197 0.002	0.054	0.225	≤18.6 >18.6	0.904 2.148	0.250 0.002
Borderline Score	9	0.035	0.334	≤18.6 >18.6	-0.074 1.189	0.942 0.157	0.039	0.739	≤18.6 >18.6	0.314 0.624	0.660 0.321
Paranoid Score	9	0.033	0.937	≤18.6 >18.6	0.852 0.941	0.345 0.204	0.024	0.909	≤18.6 >18.6	0.310 0.214	0.626 0.701
MCMI: Clinical Symptom Syndromes											
Anxiety Score	9	0.015	0.202	≤18.6 >18.6	-0.173 1.915	0.891 0.068	0.032	0.914	≤18.6 >18.6	1.267 1.141	0.158 0.149
Somatoform Score	9	0.018	0.670	≤18.6 >18.6	0.494 1.056	0.628 0.207	0.023	0.436	≤18.6 >18.6	1.581 0.840	0.030 0.193
Hypomania Score ^d	9	0.034	0.782	≤18.6 >18.6	-0.182 -0.239	0.268 0.078	0.042	0.162	≤18.6 >18.6	0.002 -0.203	0.985 0.045

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TABLE Q-11. (Continued)

Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value
Dysthymia Score	9	0.005	0.576	≤18.6 >18.6	0.328 1.262	0.799 0.233	0.008	0.616	≤18.6 >18.6	0.886 1.507	0.340 0.067
Alcohol Abuse Score	9	0.037	0.455	≤18.6 >18.6	-0.727 0.228	0.464 0.781	0.049	0.384	≤18.6 >18.6	-1.011 -0.213	0.157 0.736
Drug Abuse Score	9	0.053	0.223	≤18.6 >18.6	1.261 -0.590	0.284 0.541	0.051	0.160	≤18.6 >18.6	0.963 -0.607	0.260 0.424
Psychotic Thinking Score	9	0.103	0.074	≤18.6 >18.6	0.933 3.586	0.418 <0.001	0.079	0.057	≤18.6 >18.6	0.307 2.363	0.711 0.001
Psychotic Depression Score	9	0.083	0.352	≤18.6 >18.6	0.670 2.101	0.574 0.034	0.074	0.180	≤18.6 >18.6	0.303 1.769	0.717 0.017
Psychotic Delusion Score	9	0.032	0.267	≤18.6 >18.6	-0.127 1.531	0.912 0.110	0.042	0.180	≤18.6 >18.6	-0.153 1.320	0.858 0.081
AST ^b	10	0.140	0.576	≤18.6 >18.6	-0.0022 -0.0150	0.904 0.316	0.143	****	≤18.6 >18.6	**** ****	**** ****
ALT ^b	10	0.093	0.531	≤18.6 >18.6	0.0283 0.0053	0.339 0.825	0.091	0.872**	≤18.6 >18.6	0.0355** 0.0312**	0.086** 0.088**
GGT ^b	10	0.098	0.718	≤18.6 >18.6	0.0308 0.0127	0.432 0.693	0.124	0.305	≤18.6 >18.6	0.0790 0.0434	0.003 0.062
Alkaline Phosphatase ^b	10	0.034	0.863**	≤18.6 >18.6	0.0012** 0.0042**	0.929** 0.707**	0.063	0.551**	≤18.6 >18.6	0.0169** 0.0092**	0.090** 0.297**

TABLE Q-11. (Continued)

Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption					
		R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value	
Q-104	D-Glucaric Acid ^d	10	0.008	0.792	≤18.6 >18.6	0.0001 0.0371	0.999 0.680	0.027	0.984	≤18.6 >18.6	0.0447 0.0426	0.577 0.540
	Total Bilirubin ^b	10	<0.001	0.607	≤18.6 >18.6	-0.0068 0.0052	0.707 0.724	0.002	0.346	≤18.6 >18.6	-0.0082 0.0076	0.516 0.491
	Direct Bilirubin ^f	10	0.035	0.646	≤18.6 >18.6	0.0103 0.0261	0.710 0.251	0.026	0.982	≤18.6 >18.6	0.0258 0.0252	0.176 0.131
	LDH ^b	10	0.040	0.255	≤18.6 >18.6	-0.0141 -0.0002	0.140 0.982	0.028	0.677	≤18.6 >18.6	-0.0045 -0.0008	0.510 0.889
	Cholesterol ^b	10	0.053	0.049	≤18.6 >18.6	0.0011 0.0277	0.921 0.002	0.040	0.415**	≤18.6 >18.6	0.0065** 0.0147**	0.398** 0.030**
	HDL ^b	10	0.100	0.914**	≤18.6 >18.6	-0.0069** -0.0090**	0.648** 0.466**	0.090	0.748	≤18.6 >18.6	-0.0235 -0.0191	0.027 0.042
	Cholesterol-HDL Ratio ^b	10	0.093	****	≤18.6 >18.6	**** ****	**** ****	0.054	0.711	≤18.6 >18.6	0.0315 0.0371	0.008 <0.001
	Triglycerides ^b	10	0.018	0.525	≤18.6 >18.6	0.0472 0.0168	0.205 0.580	0.054	0.135	≤18.6 >18.6	0.1011 0.0483	<0.001 0.045
	Creatine Kinase ^b	10	0.099	0.472	≤18.6 >18.6	-0.0115 0.0131	0.676 0.556	0.085	0.482	≤18.6 >18.6	0.0057 -0.0116	0.761 0.486

TABLE Q-11. (Continued)

Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value
Systolic Blood Pressure	12	0.084	0.935**	≤18.6 >18.6	-0.318** -0.433**	0.774** 0.632**	0.088	0.727**	≤18.6 >18.6	0.173** 0.512**	0.816** 0.452**
Diastolic Blood Pressure	12	0.072	0.543	≤18.6 >18.6	0.370 -0.098	0.537 0.842	0.054	0.692	≤18.6 >18.6	-0.026 0.188	0.949 0.610
Red Blood Cell Count	13	0.012	0.660	≤18.6 >18.6	0.0013 0.0139	0.953 0.455	0.049	0.213**	≤18.6 >18.6	0.0283** 0.0031**	0.067** 0.818**
White Blood Cell Count ^b	13	0.300	0.193**	≤18.6 >18.6	-0.0013** 0.0222**	0.929** 0.059**	0.312	0.197**	≤18.6 >18.6	0.0135** 0.0303**	0.169** <0.001**
Hemoglobin	13	0.065	0.969	≤18.6 >18.6	0.0522 0.0554	0.406 0.280	0.083	0.073	≤18.6 >18.6	0.0964 -0.0056	0.024 0.881
Hematocrit	13	0.064	0.968	≤18.6 >18.6	0.1345 0.1440	0.455 0.329	0.084	0.116	≤18.6 >18.6	0.2554 -0.0016	0.037 0.989
Mean Corpuscular Volume	13	0.099	0.538	≤18.6 >18.6	0.2740 0.0509	0.347 0.830	0.089	0.781	≤18.6 >18.6	0.0495 -0.0204	0.797 0.905
Mean Corpuscular Hemoglobin	13	0.094	0.531	≤18.6 >18.6	0.0968 0.0145	0.359 0.865	0.088	0.567	≤18.6 >18.6	0.0196 -0.0326	0.779 0.599

TABLE Q-11. (Continued)

**Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time**

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value
Mean Corpuscular Hemoglobin Concentration	13	0.054	0.985	≤18.6 >18.6	-0.0055 -0.0047	0.866 0.859	0.055	0.322	≤18.6 >18.6	0.0024 -0.0270	0.917 0.179
Platelet Count	13	0.059	0.693	≤18.6 >18.6	1.217 -0.500	0.726 0.860	0.045	0.971	≤18.6 >18.6	1.658 1.768	0.381 0.394
Prothrombin Time ^b	13	0.103	0.713	≤18.6 >18.6	0.0036 0.0024	0.153 0.246	0.085	****	≤18.6 >18.6	**** ****	**** ****
Blood Urea Nitrogen ^d	14	0.051	0.233	≤18.6 >18.6	-0.030 0.011	0.272 0.630	0.062	0.560**	≤18.6 >18.6	-0.004** -0.018**	0.830** 0.271**
Urine Specific Gravity	14	0.025	0.497**	≤18.6 >18.6	0.0002** -0.0001**	0.574** 0.723**	0.014	0.441**	≤18.6 >18.6	0.0002** -0.0005**	0.425** 0.813**
T ₃ % Uptake ^b	15	0.048	0.015	≤18.6 >18.6	0.0036 -0.0114	0.465 0.004	0.031	0.058	≤18.6 >18.6	-0.0011 -0.0097	0.752 0.002
TSH ^g	15	0.030	0.476	≤18.6 >18.6	0.0178 -0.0292	0.737 0.493	0.022	0.743	≤18.6 >18.6	0.0120 -0.0041	0.754 0.899
FSH ^b	15	0.092	0.088	≤18.6 >18.6	-0.0482 0.0433	0.260 0.215	0.093	0.011	≤18.6 >18.6	-0.0348 0.0643	0.243 0.015
Testosterone ^d	15	0.243	0.410	≤18.6 >18.6	-0.1935 -0.0009	0.301 0.995	0.224	0.690	≤18.6 >18.6	-0.1147 -0.0461	0.391 0.696

TABLE Q-11. (Continued)

Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value
Testosterone ^{d,h}	15	0.109	0.456	≤18.6 >18.6	-0.3674 -0.1784	0.069 0.279	0.110	0.494	≤18.6 >18.6	-0.3531 -0.2270	0.012 0.069
Fasting Glucose ^b	15	0.103	0.097	≤18.6 >18.6	0.0149 0.0393	0.209 <0.001	0.122	0.194**	≤18.6 >18.6	0.0168** 0.0294**	0.024** <0.001**
2-Hour Postprandial Glucose ^b	15	0.112	0.486**	≤18.6 >18.6	0.0188** 0.0039**	0.264** 0.785**	0.107	0.252	≤18.6 >18.6	0.0012 0.0190	0.921 0.077
2-Hour Postprandial Glucose ^{b,h}	15	0.052	0.471**	≤18.6 >18.6	0.0292** 0.0133**	0.092** 0.368**	0.040	0.469	≤18.6 >18.6	0.0170 0.0286	0.164 0.009
CD2 Cells ^b	16	0.090	0.448	≤18.6 >18.6	-0.036 -0.003	0.289 0.907	0.126	0.717	≤18.6 >18.6	-0.007 0.005	0.773 0.835
CD4 Cells ^b	16	0.170	0.213**	≤18.6 >18.6	-0.042** 0.017**	0.259** 0.598**	0.182	0.243**	≤18.6 >18.6	-0.008** 0.036**	0.778** 0.174**
CD8 Cells ^b	16	0.059	0.721	≤18.6 >18.6	-0.029 -0.008	0.531 0.842	0.073	0.513	≤18.6 >18.6	-0.013 -0.041	0.686 0.174
CD20 Cells ^b	16	0.485	0.371	≤18.6 >18.6	0.047 0.121	0.446 0.043	0.473	0.171	≤18.6 >18.6	-0.008 0.068	0.845 0.083
CD14 Cells ^b	16	0.682	0.174	≤18.6 >18.6	-0.019 0.127	0.801 0.102	0.629	****	≤18.6 >18.6	**** ****	**** ****
CD25 Cells ^b	16	0.738	0.051	≤18.6 >18.6	-0.351 0.070	0.028 0.624	0.689	0.186	≤18.6 >18.6	-0.100 0.114	0.361 0.317

TABLE Q-11. (Continued)

Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value
HLA-DR Cells ^b	16	0.652	0.112	≤18.6 >18.6	-0.049 0.056	0.300 0.240	0.632	0.136	≤18.6 >18.6	-0.037 0.032	0.255 0.329
CD4/CD8 Ratio ^b	16	0.655	0.237	≤18.6 >18.6	0.064 -0.017	0.200 0.725	0.581	0.657	≤18.6 >18.6	0.062 0.038	0.093 0.283
TLC ^b	16	0.131	0.085	≤18.6 >18.6	-0.048 0.019	0.110 0.485	0.138	0.216	≤18.6 >18.6	-0.020 0.016	0.350 0.442
Unstimulated PHA Response ^b	16	0.734	0.553	≤18.6 >18.6	-0.0004 0.045	0.994 0.416	0.672	0.884	≤18.6 >18.6	0.032 0.024	0.414 0.538
PHA Net Response	16	0.884	0.069**	≤18.6 >18.6	10,167** -959**	0.033** 0.826**	0.815	0.976	≤18.6 >18.6	3,705 3,565	0.254 0.265
Maximum PHA Net Response	16	0.877	0.136	≤18.6 >18.6	13,263 2,760	0.013 0.585	0.827	0.685	≤18.6 >18.6	5,179 7,398	0.181 0.052
Unstimulated MLC Response ^b	16	0.797	****	≤18.6 >18.6	**** ****	**** ****	0.709	0.391**	≤18.6 >18.6	0.014** 0.087**	0.823** 0.153**
MLC Net Response	16	0.755	0.936	≤18.6 >18.6	-753 -1,291	0.872 0.792	0.697	0.487	≤18.6 >18.6	-1,356 1,914	0.673 0.559

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TABLE Q-11. (Continued)

Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value
NKCA 50/1 Net Response	16	0.467	0.253	≤18.6 >18.6	21.8 -9.9	0.278 0.629	0.465	0.060	≤18.6 >18.6	12.0 -25.6	0.394 0.067
NKCA 50/1 Percent Release	16	0.124	0.465	≤18.6 >18.6	1.491 0.119	0.313 0.926	0.061	0.558	≤18.6 >18.6	0.186 -0.631	0.854 0.510
NKCI 50/1 Net Response	16	0.916	0.073**	≤18.6 >18.6	32.6** -2.0**	0.027** 0.886**	0.913	****	≤18.6 >18.6	**** ****	**** ****
NKCI 50/1 Percent Release	16	0.758	0.078**	≤18.6 >18.6	2.6** -0.1**	0.025** 0.942**	0.756	****	≤18.6 >18.6	**** ****	**** ****
IgA ^b	16	0.045	0.480**	≤18.6 >18.6	0.046** 0.021**	0.096** 0.352**	0.050	0.688**	≤18.6 >18.6	0.027** 0.036**	0.147** 0.027**
IgG ^b	16	0.141	0.429	≤18.6 >18.6	0.014 0.0007	0.290 0.952	0.144	0.811	≤18.6 >18.6	0.011 0.009	0.208 0.301
IgM ^b	16	0.031	0.519	≤18.6 >18.6	-0.022 0.002	0.456 0.934	0.032	0.137	≤18.6 >18.6	-0.045 -0.005	0.027 0.776
FVC (% of predicted)	17	0.078	0.286	≤18.6 >18.6	-1.655 -0.677	0.024 0.257	0.127	0.255	≤18.6 >18.6	-1.924 -1.169	<0.001 0.009
FEV ₁ (% of predicted)	17	0.109	0.200	≤18.6 >18.6	-1.452 -0.101	0.085 0.883	0.153	0.262	≤18.6 >18.6	-1.433 -0.575	0.014 0.268

TABLE Q-11. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption					Maximal Assumption				
		R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value	R ²	C*T ^a	Time (Yrs.)	Adj. Slope	p-Value
FEFmax (% of predicted)	17	0.086	0.100	≤18.6	-2.560	0.063	0.102	0.283	≤18.6	-2.460	0.010
				>18.6	0.269	0.810			>18.6	-1.125	0.181
Ratio of Observed FEV ₁ to Observed FVC ⁱ	17	0.111	0.823	≤18.6	-0.024	0.224	0.143	0.785	≤18.6	-0.029	0.034
				>18.6	-0.030	0.067			>18.6	-0.034	0.005

^aP-value for test of significance for homogeneity of slopes (current dioxin continuous, time categorized); C*T=current dioxin-by-time interaction.

^bAnalysis performed on natural logarithm scale; slope based on natural logarithm of clinical parameter versus log₂ (current dioxin).

^cAnalysis performed on natural logarithm (X + 1.0) scale; slope based on natural logarithm of (avoidant score + 1.0) versus log₂ (current dioxin).

^dAnalysis performed on square root scale; slope based on square root of clinical parameter versus log₂ (current dioxin).

^eAnalysis performed on square scale; slope based on square of clinical parameter versus log₂ (current dioxin).

^fAnalysis performed on natural logarithm (X + 0.1) scale; slope based on natural logarithm (direct bilirubin + 0.1) versus log₂ (current dioxin).

^gAnalysis performed on natural logarithm (X - 0.4) scale; slope based on natural logarithm (TSH - 0.4) of clinical parameter versus log₂ (current dioxin).

^hAnalysis performed on model excluding percent body fat.

ⁱAnalysis performed on natural logarithm (1 - X) scale; slope based on natural logarithm of (1 - ratio of observed FEV₁ to observed FVC) versus log₂ (current dioxin).

**Log₂ (current dioxin)-by-time-by-covariate interaction (0.01<p≤0.05); adjusted slope and p-value derived from a model fitted after deletion of this interaction.

****Log₂ (current dioxin)-by-time-by-covariate interaction (p≤0.01); adjusted slope and p-value not presented.

Note: Statistics are based on the relationship between clinical parameter with log₂ (current dioxin) and time unless otherwise specified.

TABLE Q-12.
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Percent Body Fat	6	0.044	Adj. Mean (n): Difference (p-value):	21.90 (786)	20.01 (345) -1.89 (<0.001)	22.15 (196) 0.24 (0.541)	23.63 (187) 1.73 (<0.001)	<0.001
Sedimentation Rate ^b (mm/hr)	6	0.074	Adj. Mean (n): Difference (p-value):	5.19 (751)**	4.50 (328)** -0.69 (0.007)**	5.88 (192)** 0.69 (0.054)**	6.31 (181)** 1.12 (0.004)**	<0.001**
Average Sleep Each Night (hours)	9	0.030	Adj. Mean (n): Difference (p-value):	6.61 (778)	6.61 (339) 0.00 (0.947)	6.66 (192) 0.05 (0.539)	6.54 (184) -0.07 (0.410)	0.725
MCMI: Basic Personality Patterns								
Schizoid Score ^b	9	0.036	Adj. Mean (n): Difference (p-value):	23.7 (775)	23.1 (335) -0.6 (0.522)	24.4 (190) 0.7 (0.519)	27.0 (180) 3.4 (0.006)	0.027
Avoidant Score ^c	9	0.029	Adj. Mean (n): Difference (p-value):	16.2 (775)	15.5 (335) -0.8 (0.406)	16.3 (190) 0.1 (0.957)	18.0 (180) 1.8 (0.166)	0.351
Dependent Score ^d	9	0.022	Adj. Mean (n): Difference (p-value):	42.2 (775)	40.2 (335) -2.0 (0.133)	38.8 (190) -3.4 (0.037)	42.3 (180) 0.1 (0.944)	0.115
Histrionic Score ^e	9	0.053	Adj. Mean (n): Difference (p-value):	66.8 (775)	66.7 (335) -0.1 (0.896)	66.0 (190) -0.7 (0.492)	64.2 (180) -2.6 (0.020)	0.132
Narcissistic Score	9	0.021	Adj. Mean (n): Difference (p-value):	66.7 (775)	68.5 (335) 1.8 (0.075)	68.5 (190) 1.8 (0.145)	65.6 (180) -1.2 (0.361)	0.084
Antisocial Score	9	0.020	Adj. Mean (n): Difference (p-value):	59.6 (780)**	61.6 (337)** 2.0 (0.107)**	63.5 (192)** 3.9 (0.012)**	60.9 (181)** 1.3 (0.405)**	0.061**

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TABLE Q-12. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Compulsive Score ^e	9	0.056	Adj. Mean (n): Difference (p-value):	68.5 (775)	68.6 (335) 0.1 (0.829)	68.7 (190) 0.2 (0.730)	68.8 (180) 0.3 (0.641)	0.962
Passive-Aggressive Score ^d	9	0.051	Adj. Mean (n): Difference (p-value):	18.9 (775)**	18.0 (335)** -0.9 (0.315)**	20.7 (190)** 1.8 (0.138)**	18.9 (180)** 0.0 (0.965)**	0.248**
MCMI: Pathological Personality Disorders								
Schizotypal Score	9	0.024	Adj. Mean (n): Difference (p-value):	33.9 (775)	32.5 (335) -1.4 (0.251)	33.5 (190) -0.4 (0.788)	37.3 (180) 3.4 (0.029)	0.053
Borderline Score	9	0.027	Adj. Mean (n): Difference (p-value):	33.2 (775)**	31.5 (335)** -1.8 (0.110)**	32.0 (190)** -1.2 (0.369)**	32.7 (180)** -0.6 (0.694)**	0.415**
Paranoid Score	9	0.022	Adj. Mean (n): Difference (p-value):	53.3 (775)	55.2 (335) 1.9 (0.067)	55.1 (190) 1.7 (0.166)	54.7 (180) 1.4 (0.284)	0.202
MCMI: Clinical Symptom Syndromes								
Anxiety Score	9	0.028	Adj. Mean (n): Difference (p-value):	48.0 (776)**	45.7 (338)** -2.2 (0.107)**	46.7 (192)** -1.2 (0.461)**	49.2 (183)** 1.3 (0.464)**	0.248**
Somatoform Score	9	0.024	Adj. Mean (n): Difference (p-value):	52.4 (775)**	51.9 (335)** -0.5 (0.675)**	51.0 (190)** -1.4 (0.334)**	53.9 (180)** 1.5 (0.296)**	0.438**
Hypomania Score ^d	9	0.025	Adj. Mean (n): Difference (p-value):	**** (775)	**** (335) ****	**** (190) ****	**** (180) ****	****

TABLE Q-12. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Dysthymia Score	9	0.013	Adj. Mean (n): Difference (p-value):	49.4 (776)** -1.9 (0.191)**	47.5 (336)** -0.7 (0.699)**	48.7 (190)** -0.7 (0.699)**	50.5 (183)** 1.1 (0.535)**	0.450**
Alcohol Abuse Score	9	0.023	Adj. Mean (n): Difference (p-value):	**** (776) ****	**** (338) ****	**** (192) ****	**** (183) ****	****
Drug Abuse Score	9	0.023	Adj. Mean (n): Difference (p-value):	51.7 (780) -0.4 (0.761)	51.3 (337) -0.4 (0.761)	52.6 (192) 0.9 (0.552)	50.5 (181) -1.1 (0.486)	0.769
Psychotic Thinking Score	9	0.045	Adj. Mean (n): Difference (p-value):	34.4 (775) -1.6 (0.223)	32.8 (335) -1.6 (0.223)	33.1 (190) -1.3 (0.400)	36.4 (180) 2.0 (0.220)	0.215
Psychotic Depression Score	9	0.040	Adj. Mean (n): Difference (p-value):	23.5 (775) -1.4 (0.274)	22.1 (335) -1.4 (0.274)	22.5 (190) -1.0 (0.543)	24.8 (180) 1.3 (0.450)	0.475
Psychotic Delusion Score	9	0.045	Adj. Mean (n): Difference (p-value):	44.2 (775) 1.8 (0.166)	46.1 (335) 1.8 (0.166)	46.7 (190) 2.5 (0.125)	46.7 (180) 2.5 (0.144)	0.213
AST ^b (U/L)	10	0.045	Adj. Mean (n): Difference (p-value):	26.37 (779) -0.66 (0.189)	25.71 (339) -0.66 (0.189)	26.32 (191) -0.05 (0.943)	26.90 (185) 0.53 (0.409)	0.374
ALT ^b (U/L)	10	0.050	Adj. Mean (n): Difference (p-value):	20.34 (777)** -1.18 (0.055)**	19.16 (338)** -1.18 (0.055)**	20.83 (191)** 0.49 (0.531)**	22.09 (182)** 1.75 (0.035)**	0.012**
GGT ^b (U/L)	10	0.088	Adj. Mean (n): Difference (p-value):	34.64 (777) -3.15 (0.017)	31.49 (338) -3.15 (0.017)	38.28 (191) 3.64 (0.043)	40.82 (182) 6.18 (0.001)	<0.001
Alkaline Phosphatase ^b (U/L)	10	0.027	Adj. Mean (n): Difference (p-value):	90.08 (777) 1.95 (0.170)	92.03 (339) 1.95 (0.170)	93.29 (191) 3.21 (0.070)	93.58 (184) 3.50 (0.055)	0.098

TABLE Q-12. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value	
				Background	Unknown	Low	High		
Q-114	D-Glucaric Acid ^d (μ M)	10	0.013	Adj. Mean (n): Difference (p-value):	14.11 (727) -0.12 (0.894)	13.99 (317) 0.32 (0.778)	14.43 (180) 1.11 (0.339)	15.22 (173) 1.11 (0.339)	0.781
	Total Bilirubin ^b (mg/dl)	10	0.016	Adj. Mean (n): Difference (p-value):	0.779 (779) -0.024 (0.121)	0.755 (339) -0.019 (0.332)	0.760 (191) -0.003 (0.904)	0.776 (185) -0.003 (0.904)	0.409
	Direct Bilirubin ^c (mg/dl)	10	0.020	Adj. Mean (n): Difference (p-value):	0.148 (779)*** -0.002 (0.708)***	0.146 (341)*** 0.008 (0.400)***	0.156 (193)*** 0.024 (0.018)***	0.172 (186)*** 0.024 (0.018)***	0.079***
	LDH ^b (U/L)	10	0.010	Adj. Mean (n): Difference (p-value):	130.3 (779) -1.1 (0.450)	129.2 (341) -0.5 (0.794)	129.8 (193) 1.1 (0.518)	131.4 (186) 1.1 (0.518)	0.725
	Cholesterol ^b (mg/dl)	10	0.020	Adj. Mean (n): Difference (p-value):	212.9 (777) 1.2 (0.612)	214.1 (338) 1.6 (0.608)	214.5 (191) 6.6 (0.038)	219.5 (182) 6.6 (0.038)	0.229
	HDL ^b (mg/dl)	10	0.106	Adj. Mean (n): Difference (p-value):	45.92 (777)** 3.01 (<0.001)**	48.93 (338)** -1.07 (0.219)**	44.85 (191)** -1.33 (0.137)**	44.59 (182)** -1.33 (0.137)**	<0.001**
	Cholesterol-HDL Ratio	10	0.061	Adj. Mean (n): Difference (p-value):	4.63 (777) -0.27 (<0.001)	4.36 (338) 0.16 (0.136)	4.79 (191) 0.33 (0.003)	4.96 (182) 0.33 (0.003)	<0.001
	Triglycerides ^b (mg/dl)	10	0.051	Adj. Mean (n): Difference (p-value):	104.8 (777)** -11.7 (0.004)**	93.1 (338)** 19.3 (<0.001)**	124.1 (191)** 18.2 (0.002)**	123.0 (182)** 18.2 (0.002)**	<0.001**
	Creatine Kinase ^b (U/L)	10	0.114	Adj. Mean (n): Difference (p-value):	151.6 (779)** -2.1 (0.659)**	149.5 (341)** -2.4 (0.680)**	149.2 (193)** 5.7 (0.363)**	157.3 (186)** 5.7 (0.363)**	0.683**

TABLE Q-12. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Systolic Blood Pressure (mm Hg)	12	0.120	Adj. Mean (n): Difference (p-value):	128.43 (662)*** -0.62 (0.592)***	127.81 (301)*** 0.01 (0.996)***	128.44 (173)*** 2.02 (0.189)***	130.46 (149)***	0.491***
Systolic Blood Pressure ^g (mm Hg)	12	0.060	Adj. Mean (n): Difference (p-value):	128.94 (667)** -2.06 (0.088)**	126.89 (303)** 0.30 (0.837)**	129.25 (174)** 3.67 (0.019)**	132.61 (150)**	0.012**
Diastolic Blood Pressure (mm Hg)	12	0.089	Adj. Mean (n): Difference (p-value):	74.54 (659)*** -0.19 (0.772)***	74.36 (297)*** 1.68 (0.032)***	76.22 (170)*** 1.42 (0.098)***	75.96 (143)***	0.062***
Diastolic Blood Pressure ^g (mm Hg)	12	0.045	Adj. Mean (n): Difference (p-value):	74.64 (664)** -0.83 (0.199)**	73.81 (298)** 1.85 (0.020)**	76.49 (171)** 2.06 (0.017)**	76.71 (144)**	0.002**
Red Blood Cell Count (million/mm ³)	13	0.050	Adj. Mean (n): Difference (p-value):	5.031 (783)	4.994 (345) -0.036 (0.128)	5.025 (195) -0.006 (0.842)	5.038 (187) 0.007 (0.816)	0.440
White Blood Cell Count ^b (thousand/mm ³)	13	0.312	Adj. Mean (n): Difference (p-value):	6.591 (783)	6.536 (345) -0.055 (0.590)	6.771 (195) 0.180 (0.159)	6.983 (187) 0.392 (0.004)	0.010
Hemoglobin (gm/dl)	13	0.100	Adj. Mean (n): Difference (p-value):	15.467 (783)	15.451 (345) -0.016 (0.808)	15.525 (195) 0.058 (0.464)	15.548 (187) 0.081 (0.320)	0.643
Hematocrit (percent)	13	0.106	Adj. Mean (n): Difference (p-value):	44.965 (783)**	44.792 (345)** -0.173 (0.355)**	45.001 (195)** 0.035 (0.878)**	45.153 (187)** 0.188 (0.428)**	0.573**
Mean Corpuscular Volume (cubic micra)	13	0.120	Adj. Mean (n): Difference (p-value):	89.621 (783)	89.966 (345) 0.345 (0.242)	89.814 (195) 0.194 (0.595)	89.898 (187) 0.277 (0.460)	0.653

TABLE Q-12. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Mean Corpuscular Hemoglobin (micromicrogram)	13	0.111	Adj. Mean (n): Difference (p-value):	30.871 (783) 0.184 (0.090)	31.055 (345) 0.153 (0.253)	31.024 (195) 0.095 (0.024)	30.965 (187) 0.015 (0.727)	0.325
Mean Corpuscular Hemoglobin Concentration (gm/dl)	13	0.059	Adj. Mean (n): Difference (p-value):	34.401 (783) 0.083 (0.016)	34.484 (345) 2.67 (0.461)**	34.497 (195) 5.60 (0.210)	34.416 (187) 8.76 (0.057)**	0.029
Platelet Count (thousand/mm ³)	13	0.028	Adj. Mean (n): Difference (p-value):	259.40 (783)** 2.67 (0.461)**	262.07 (345)** 2.67 (0.461)**	265.00 (195)** 5.60 (0.210)	268.16 (187)** 8.76 (0.057)**	0.217**
Prothrombin Time ^b (seconds)	13	0.050	Adj. Mean (n): Difference (p-value):	**** (785) ****	**** (345) ****	**** (195) ****	**** (186) ****	****
Blood Urea Nitrogen ^d (mg/dl)	14	0.040	Adj. Mean (n): Difference (p-value):	13.9 (784) -0.2 (0.444)	13.7 (344) -0.2 (0.444)	13.5 (194) -0.4 (0.138)	13.8 (187) -0.1 (0.821)	0.495
Urine Specific Gravity	14	0.010	Adj. Mean (n): Difference (p-value):	1.0206 (786) -0.0003 (0.479)	1.0204 (345) 0.00004 (0.934)	1.0207 (196) 0.00004 (0.934)	1.0209 (187) 0.0003 (0.608)	0.797
T ₃ % Uptake ^b	15	0.020	Adj. Mean (n): Difference (p-value):	30.65 (772)*** 0.02 (0.895)***	30.67 (338)*** -0.29 (0.130)***	30.36 (194)*** -0.29 (0.130)***	29.99 (181)*** -0.66 (0.001)***	0.005***
TSH ^g (μIU/ml)	15	0.042	Adj. Mean (n): Difference (p-value):	0.920 (618) 0.028 (0.362)	0.948 (265) 0.058 (0.135)	0.978 (151) 0.058 (0.135)	1.026 (154) 0.106 (0.010)	0.053
FSH ^b (mIU/ml)	15	0.088	Adj. Mean (n): Difference (p-value):	7.50 (786) 0.23 (0.507)	7.73 (345) 0.25 (0.549)	7.75 (196) 0.25 (0.549)	8.08 (187) 0.58 (0.187)	0.583

TABLE Q-12. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
Testosterone ^c (ng/dl)	15	0.203	Adj. Mean (n): Difference (p-value):	519.0 (785) 12.4 (0.180)	531.4 (343) 2.6 (0.821)	521.6 (193) -13.9 (0.230)	505.1 (187) -13.9 (0.230)	0.248
Testosterone ^{d,i} (ng/dl)	15	0.096	Adj. Mean (n): Difference (p-value):	514.0 (785) 31.9 (0.001)	545.9 (343) -0.7 (0.953)	513.3 (193) -31.1 (0.010)	462.9 (187) -31.1 (0.010)	<0.001
Fasting Glucose ^b (mg/dl)	15	0.101	Adj. Mean (n): Difference (p-value):	101.3 (777)*** -1.4 (0.151)***	99.9 (338)*** 1.4 (0.250)***	102.7 (191)*** 7.6 (<0.001)***	108.9 (182)*** 7.6 (<0.001)***	<0.001***
2-Hour Postprandial Glucose ^b (mg/dl)	15	0.107	Adj. Mean (n): Difference (p-value):	110.9 (705) -1.4 (0.471)	109.5 (314) -1.6 (0.507)	109.3 (175) -2.2 (0.380)	113.1 (160) 2.2 (0.380)	0.557
2-Hour Postprandial Glucose ^{b,i} (mg/dl)	15	0.038	Adj. Mean (n): Difference (p-value):	111.1 (705) -4.1 (0.035)	107.0 (314) -1.0 (0.676)	110.1 (175) 5.4 (0.041)	116.5 (160) 5.4 (0.041)	0.010
CD2 Cells ^b (cells/mm ³)	16	0.106	Adj. Mean (n): Difference (p-value):	1,687.0 (306)** -41.5 (0.470)**	1,645.5 (130)** 22.3 (0.759)**	1,709.3 (73)** 17.9 (0.805)**	1,704.9 (76)** 17.9 (0.805)**	0.825**
CD4 Cells ^b (cells/mm ³)	16	0.095	Adj. Mean (n): Difference (p-value):	907.1 (301) -40.6 (0.259)	866.5 (127) 38.3 (0.409)	945.4 (72) 21.9 (0.637)	929.0 (72) 21.9 (0.637)	0.406
CD8 Cells ^b (cells/mm ³)	16	0.037	Adj. Mean (n): Difference (p-value):	473.1 (301) 12.1 (0.614)	485.2 (126) -7.8 (0.790)	465.3 (71) 2.4 (0.934)	475.5 (73) 2.4 (0.934)	0.937
CD20 Cells ^b (cells/mm ³)	16	0.344	Adj. Mean (n): Difference (p-value):	172.4 (301)** 4.1 (0.670)**	176.5 (127)** 10.8 (0.377)**	183.2 (71)** 18.4 (0.148)**	190.8 (73)** 18.4 (0.148)**	0.485**

TABLE Q-12. (Continued)

Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
CD14 Cells ^b (cells/mm ³)	16	0.423	Adj. Mean (n): Difference (p-value):	29.3 (301) -0.9 (0.705)	28.4 (127) -1.4 (0.612)	27.9 (73) -1.9 (0.504)	27.4 (74) -1.9 (0.504)	0.896
CD25 Cells ^b (cells/mm ³)	16	0.546	Adj. Mean (n): Difference (p-value):	10.9 (214) 2.1 (0.203)	13.0 (90) -0.3 (0.839)	10.6 (51) 0.6 (0.761)	11.5 (57) 0.6 (0.761)	0.603
Q-118 HLA-DR Cells ^b (cells/mm ³)	16	0.444	Adj. Mean (n): Difference (p-value):	**** (300) ****	**** (127) ****	**** (73) ****	**** (74) ****	****
CD4/CD8 Ratio ^b	16	0.320	Adj. Mean (n): Difference (p-value):	1.89 (301) -0.17 (0.088)	1.72 (126) 0.02 (0.893)	1.91 (72) 0.10 (0.477)	1.99 (72) 0.10 (0.477)	0.214
TLC ^b (cpm)	16	0.124	Adj. Mean (n): Difference (p-value):	**** (300) ****	**** (127) ****	**** (72) ****	**** (74) ****	****
Unstimulated PHA Response ^b (cpm)	16	0.565	Adj. Mean (n): Difference (p-value):	2,144 (296) -7 (0.951)	2,137 (123) 140 (0.304)	2,284 (70) 24 (0.860)	2,168 (73) 24 (0.860)	0.765
PHA Net Response (cpm)16 (Concentration 1)	0.685	Adj. Mean (n): Difference (p-value):	125,477 (297) 4,627 (0.358)	130,104 (121) 4,842 (0.423)	130,318 (71) 5,539 (0.362)	127,162 (72) 10,295 (0.100)	127,162 (72) 10,295 (0.100)	0.745
PHA Net Response (cpm)16 (Concentration 2)	0.707	Adj. Mean (n): Difference (p-value):	165,397 (297) -3,065 (0.544)	162,332 (121) 5,539 (0.362)	170,936 (71) 5,539 (0.362)	175,692 (72) 10,295 (0.100)	175,692 (72) 10,295 (0.100)	0.216
PHA Net Response (cpm)16 (Concentration 3)	0.627	Adj. Mean (n): Difference (p-value):	**** (296) ****	**** (121) ****	**** (70) ****	**** (72) ****	****	****

TABLE Q-12. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value
				Background	Unknown	Low	High	
PHA Net Response (cpm) ^b (Across Day and Concentration)	16	0.712	Adj. Mean (n): Difference (p-value):	146,409 (297)	146,610 (121) 201 (0.963)	153,318 (71) 6,909 (0.183)	152,015 (72) 5,606 (0.294)	0.457
Maximum PHA Net Response (cpm)	16	0.730	Adj. Mean (n): Difference (p-value):	199,500 (297)	195,650 (121) -3,850 (0.465)	201,223 (71) 1,723 (0.786)	210,652 (72) 11,152 (0.088)	0.221
Unstimulated MLC Response ^b (cpm)	16	0.503	Adj. Mean (n): Difference (p-value):	3,862 (293)	4,160 (124) 298 (0.376)	4,420 (71) 558 (0.179)	4,797 (71) 935 (0.038)	0.160
MLC Net Response (cpm)	16	0.572	Adj. Mean (n): Difference (p-value):	95,904 (294)	97,140 (124) 1,236 (0.790)	100,908 (71) 5,004 (0.371)	90,642 (71) -5,263 (0.361)	0.528
NKCA 50/1 Net Response (cpm)	16	0.377	Adj. Mean (n): Difference (p-value):	414.2 (291)	425.2 (126) 11.0 (0.604)	377.8 (70) -36.4 (0.167)	386.3 (72) -27.9 (0.297)	0.299
NKCA 50/1 Percent Release	16	0.049	Adj. Mean (n): Difference (p-value):	35.2 (291)	36.6 (126) 1.4 (0.364)	32.2 (70) -3.0 (0.132)	33.7 (72) -1.5 (0.447)	0.202
NKCI 50/1 Net Response (cpm)	16	0.845	Adj. Mean (n): Difference (p-value):	**** (298)	**** (123)	**** (71)	**** (74)	****
NKCI 50/1 Percent Release	16	0.575	Adj. Mean (n): Difference (p-value):	61.9 (298)** -0.4 (0.679)**	61.5 (123)** 0.4 (0.758)**	62.3 (71)** 0.4 (0.758)**	61.1 (74)** -0.9 (0.488)**	0.845**
IgA ^b (mg/dl)	16	0.021	Adj. Mean (n): Difference (p-value):	219.4 (759)	202.1 (336) -17.3 (0.003)	219.3 (190) -0.1 (0.982)	227.8 (178) 8.4 (0.292)	0.007

TABLE Q-12. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter (Units)	Reference Chapter	R ²	Statistic ^a	Current Dioxin Category				Overall p-Value	
				Background	Unknown	Low	High		
Q-120	IgG ^b (mg/dl)	16	0.082	Adj. Mean (n): Difference (p-value):	1,120.3 (757) -33.2 (0.028)	1,087.1 (335) 2.1 (0.915)	1,122.4 (190) 1.8 (0.927)	1,122.1 (175) 1.8 (0.927)	0.132
	IgM ^b (mg/dl)	16	0.021	Adj. Mean (n): Difference (p-value):	103.0 (757) 3.6 (0.266)	106.6 (335) -6.7 (0.078)	96.3 (190) 2.9 (0.477)	105.9 (175) 2.9 (0.477)	0.099
	FVC (% of predicted)	17	0.118	Adj. Mean (n): Difference (p-value):	91.7 (786)** 1.6 (0.054)**	93.2 (344)** -1.3 (0.194)**	90.4 (196)** -4.3 (<0.001)**	87.4 (187)** -2.2 (0.060)**	<0.001**
	FEV ₁ (% of predicted)	17	0.168	Adj. Mean (n): Difference (p-value):	93.5 (786)** 0.6 (0.535)**	94.1 (344)** -1.6 (0.160)**	91.9 (196)** -3.0 (0.100)	91.3 (187)** -3.0 (0.106)	0.091**
	FEFmax (% of predicted)	17	0.088	Adj. Mean (n): Difference (p-value):	137.6 (786) 2.1 (0.154)	139.7 (344) -0.007 (0.042)	134.6 (196) -0.002 (0.623)	134.5 (187) 0.017 (<0.001)	0.026
	Ratio of Observed FEV ₁ to Observed FVC ⁱ	17	0.178	Adj. Mean (n): Difference (p-value):	0.824 (786) -0.007 (0.042)	0.817 (344) -0.002 (0.623)	0.822 (196) 0.017 (<0.001)	0.841 (187) 0.017 (<0.001)	<0.001

^aDifferences are relative to background adjusted mean.

^bAdjusted means transformed from natural logarithm scale; difference of adjusted means calculated after transformation to original scale; p-value based on difference of adjusted means on natural logarithm scale.

^cAdjusted means transformed from natural logarithm (X + 1.0) scale; difference of adjusted means calculated after transformation to original scale; p-value based on difference of adjusted means on natural logarithm (X + 1.0) scale.

^dAdjusted means transformed from square root scale; difference of adjusted means calculated after transformation to original scale; p-value based on difference of adjusted means on square root scale.

TABLE Q-12. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

e Adjusted means transformed from square scale; difference of adjusted means calculated after transformation to original scale; p-value based on difference of adjusted means on square scale.

f Adjusted means transformed from natural logarithm ($X + 0.1$) scale; difference of adjusted means calculated after transformation to original scale; p-value based on difference of adjusted means on natural logarithm ($X + 0.1$) scale.

g Analysis performed on model excluding percent body fat and cholesterol.

h Adjusted means transformed from natural logarithm ($X - 0.4$) scale; difference of adjusted means calculated after transformation to original scale; p-value based on difference of adjusted means on natural logarithm (TSH - 0.4) scale.

i Analysis performed on model excluding percent body fat.

j Adjusted means transformed from natural logarithm ($1 - X$) scale; difference of adjusted means calculated after transformation to original scale; p-value based on difference of means on natural logarithm ($1 - X$) scale.

**Categorized current dioxin-by-covariate interaction ($0.01 < p \leq 0.05$); adjusted mean, difference of adjusted means, and p-value derived from a model fitted after deletion of this interaction.

***Categorized current dioxin-by-covariate interaction ($p \leq 0.01$); adjusted mean, difference of adjusted means, and p-value derived from a model fitted after deletion of this interaction.

****Categorized current dioxin-by-covariate interaction ($p \leq 0.01$); adjusted mean, difference of adjusted means, and p-value not presented.

Note: Background (Comparisons): Current Dioxin ≤ 10 ppt.

Unknown (Ranch Hands): Current Dioxin ≤ 10 ppt.

Low (Ranch Hands): 15 ppt $<$ Current Dioxin ≤ 33.3 ppt.

High (Ranch Hands): Current Dioxin > 33.3 ppt.

TABLE Q-13.
Summary of Adjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	<u>Minimal Assumption</u>		<u>Maximal Assumption</u>	
		Adj. Relative Risk (95% C.I.)	p-Value	Adj. Relative Risk (95% C.I.)	p-Value
Self-Perception of Health	6	1.14 (0.87,1.49)**	0.360**	1.23 (1.00,1.52)**	0.056**
Appearance of Illness or Distress by Physician	6	1.36 (0.60,3.09)	0.478	1.61 (0.81,3.21)	0.195
Relative Age	6	1.08 (0.77,1.51)	0.660	1.05 (0.82,1.34)	0.697
Percent Body Fat	6	1.25 (1.05,1.47)	0.010	1.37 (1.20,1.55)	<0.001
Sedimentation Rate	6	1.22 (0.95,1.58)	0.134	1.33 (1.08,1.63)	0.008
All Skin Neoplasms	7	0.77 (0.61,0.97)	0.021	0.92 (0.78,1.08)	0.278
Malignant Skin Neoplasms	7	0.82 (0.60,1.13)**	0.212**	0.88 (0.71,1.11)	0.276
Benign Skin Neoplasms (Non-Blacks Only)	7	0.93 (0.70,1.25)	0.635	0.97 (0.79,1.20)	0.771
Benign Skin Neoplasms (Blacks Included)	7	0.93 (0.70,1.24)	0.609	0.97 (0.79,1.20)	0.773
Skin Neoplasms of Uncertain Behavior or Unspecified Nature	7	--	--	--	--
<u>Basal Cell Carcinoma</u>	7	0.85 (0.60,1.18)	0.317	0.92 (0.72,1.16)	0.449
Ear, Face, Head, and Neck	7	0.59 (0.36,0.98)	0.025	0.77 (0.56,1.05)	0.087
Trunk	7	1.01 (0.62,1.67)	0.954	1.08 (0.75,1.57)	0.684
Upper Extremities	7	--	--	0.62 (0.24,1.58)	0.264
Lower Extremities	7	--	--	--	--
Other Sites	7	1.34 (0.64,2.81)	0.458	1.62 (0.87,3.01)	0.143
<u>Sun Exposure-Related Malignant Skin Neoplasms</u>	7	0.82 (0.59,1.13)**	0.212**	0.87 (0.69,1.10)	0.235
Ear, Face, Head, and Neck	7	0.65 (0.41,1.03)	0.047	0.83 (0.61,1.11)	0.197
Trunk	7	0.81 (0.48,1.34)	0.389	0.99 (0.69,1.43)	0.967
Upper Extremities	7	--	--	0.95 (0.49,1.86)	0.889
Lower Extremities	7	--	--	--	--
Other Sites	7	1.34 (0.64,2.81)	0.458	1.62 (0.87,3.01)	0.143
<u>Melanoma</u>	7	--	--	--	--
Ear, Face, Head, and Neck	7	--	--	--	--
Trunk	7	--	--	--	--
Upper Extremities	7	--	--	--	--
Lower Extremities	7	--	--	--	--
Other Sites	7	--	--	--	--
Squamous Cell Carcinoma	7	0.92 (0.34,2.48)	0.860	1.26 (0.59,2.72)	0.560
<u>Basal Cell Carcinoma by Occupation</u>					
Officer-Ear, Face, Head, and Neck vs. None	7	1.31 (0.27,6.47)	0.740	1.25 (0.56,2.81)	0.581
Officer-Other Sites vs. None	7	--	--	0.85 (0.26,2.76)	0.783
Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7	0.62 (0.19,2.01)	0.426	0.52 (0.23,1.16)	0.112
Enlisted Flyer-Other Sites vs. None	7	1.97 (0.86,4.49)	0.108	2.22 (1.04,4.74)	0.039

TABLE Q-13. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	<u>Minimal Assumption</u>		<u>Maximal Assumption</u>	
		Adj. Relative Risk (95% C.I.)	p-Value	Adj. Relative Risk (95% C.I.)	p-Value
Enlisted Groundcrew-Ear, Face, Head, and Neck vs. None	7	0.43 (0.21,0.88)	0.021	0.67 (0.41,1.09)	0.104
Enlisted Groundcrew-Other Sites vs. None	7	0.56 (0.25,1.29)	0.175	0.83 (0.49,1.42)	0.498
<u>Sun Exposure-Related Malignant Skin Neoplasms by Occupation</u>					
Officer-Ear, Face, Head, and Neck vs. None	7	0.82 (0.16,4.26)	0.813	1.20 (0.56,2.57)	0.631
Officer-Other Sites vs. None	7	0.65 (0.05,9.10)	0.746	0.89 (0.32,2.52)	0.830
Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7	0.61 (0.21,1.77)	0.364	0.54 (0.26,1.13)	0.101
Enlisted Flyer-Other Sites vs. None	7	1.89 (0.83,4.30)	0.128	2.14 (1.00,4.54)	0.049
Enlisted Groundcrew-Ear, Face, Head, and Neck vs. None	7	0.56 (0.30,1.03)	0.063	0.77 (0.49,1.22)	0.265
Enlisted Groundcrew-Other Sites vs. None	7	0.56 (0.28,1.13)	0.104	0.83 (0.49,1.41)	0.485
Basal Cell Carcinoma (One vs. None)	7	0.84 (0.59,1.20)	0.321	0.94 (0.73,1.21)	0.629
Basal Cell Carcinoma (Multiple vs. None)	7	0.59 (0.28,1.26)	0.127	0.80 (0.49,1.28)	0.324
All Systemic Neoplasms	7	1.22 (0.96,1.55)	0.109	1.32 (1.09,1.61)	0.006
Malignant Systemic Neoplasms	7	0.63 (0.32,1.25)	0.144	0.96 (0.63,1.48)	0.859
Benign Systemic Neoplasms	7	1.40 (1.07,1.81)	0.015	1.49 (1.20,1.84)	<0.001
Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	7	0.97 (0.33,2.81)	0.947	1.33 (0.61,2.93)	0.498
<u>Systemic Neoplasms: Location/Site</u>					
Ear, Face, Head, and Neck	7	--	--	--	--
Oral Cavity, Pharynx, and Larynx	7	--	--	--	--
Brain	7	--	--	--	--
Thymus and Mediastinum	7	--	--	--	--
Thyroid Gland	7	--	--	--	--
Bronchus and Lung	7	--	--	--	--
Colon and Rectum	7	--	--	--	--
Kidney and Bladder	7	0.75 (0.26,2.21)	0.583	0.86 (0.43,1.73)	0.673
Prostate	7	--	--	--	--
Testicles	7	0.59 (0.17,2.09)	0.363	1.00 (0.44,2.30)	0.999
Ill-Defined Sites	7	--	--	--	--
Carcinoma in Situ of Penis	7	--	--	--	--

TABLE Q-13. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	<u>Minimal Assumption</u>		<u>Maximal Assumption</u>	
		Adj. Relative Risk (95% C.I.)	p-Value	Adj. Relative Risk (95% C.I.)	p-Value
Carcinoma in Situ of Other and Unspecified Sites	7	--	--	--	--
Hodgkin's Disease	7	--	--	--	--
Leukemia	7	--	--	--	--
Other Malignant Neoplasms of Lymphoid and Histiocytic Tissue	7	--	--	--	--
All Skin and Systemic Neoplasms	7	0.98 (0.82,1.18)	0.851	1.08 (0.94,1.23)	0.285
Inflammatory Diseases	8	--	--	--	--
Hereditary and Degenerative Diseases	8	0.91 (0.62,1.33)	0.614	0.96 (0.73,1.27)	0.781
Peripheral Disorders	8	1.04 (0.85,1.28)	0.703	1.05 (0.90,1.22)	0.564
Disorders of the Eye	8	1.07 (0.89,1.29)	0.486	1.07 (0.93,1.23)	0.365
Tympanic Membrane Disorder	8	0.99 (0.72,1.37)	0.950	1.06 (0.84,1.35)	0.618
Otitis	8	1.13 (0.89,1.43)	0.331	0.93 (0.78,1.12)	0.451
Hearing Loss	8	1.16 (0.97,1.39)	0.100	1.08 (0.95,1.22)	0.257
Other Neurological Disorders	8	1.20 (1.01,1.43)	0.037	1.35 (1.18,1.54)	<0.001
Other Neurological Disorders ^a	8	0.97 (0.80,1.17)	0.740	1.04 (0.80,1.21)	0.567
Smell	8	0.67 (0.22,2.00)	0.432	0.93 (0.45,1.89)	0.830
Visual Fields	8	--	--	--	--
Light Reaction	8	1.42 (0.61,3.29)	0.435	0.99 (0.54,1.82)	0.990
Ocular Movement	8	1.01 (0.38,2.68)	0.988	1.00 (0.49,2.07)	0.988
Facial Sensation	8	0.77 (0.26,2.25)	0.619	1.12 (0.51,2.44)	0.776
Smile	8	1.88 (0.88,4.02)	0.124	1.18 (0.65,2.15)	0.588
Palpebral Fissure	8	1.22 (0.71,2.08)	0.483	1.12 (0.74,1.71)	0.598
Balance	8	--	--	--	--
Speech	8	--	--	--	--
Neck Range of Motion	8	1.24 (0.97,1.59)***	0.087***	1.05 (0.87,1.27)***	0.597***
Cranial Nerve Index	8	1.21 (0.97,1.50)	0.090	1.05 (0.89,1.23)**	0.591**
Cranial Nerve Index Without Range of Motion	8	1.04 (0.73,1.48)	0.829	1.05 (0.81,1.37)	0.692
Pin Prick	8	1.07 (0.80,1.44)**	0.633**	1.10 (0.89,1.37)**	0.390**
Light Touch	8	1.01 (0.69,1.50)	0.951	0.99 (0.75,1.30)	0.938
Muscle Status	8	1.09 (0.65,1.83)	0.747	1.21 (0.80,1.83)	0.381
Vibration	8	0.87 (0.48,1.59)	0.644	1.11 (0.73,1.70)	0.619
Patellar Reflex	8	1.11 (0.67,1.85)	0.686	1.33 (0.89,2.00)	0.182
Achilles Reflex	8	0.94 (0.68,1.29)	0.698	1.17 (0.91,1.49)	0.224
Biceps Reflex	8	--	--	--	--
Babinski Reflex	8	--	--	--	--
Tremor	8	1.05 (0.66,1.66)	0.850	1.08 (0.77,1.51)	0.675
Coordination	8	1.35 (0.78,2.36)	0.296	1.48 (0.94,2.32)	0.101
Romberg Sign	8	--	--	--	--
Gait	8	1.24 (0.82,1.87)	0.323	1.30 (0.94,1.80)	0.123

TABLE Q-13. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption		Maximal Assumption	
		Adj. Relative Risk (95% C.I.)	p-Value	Adj. Relative Risk (95% C.I.)	p-Value
CNS Index	8	1.25 (0.93,1.68)**	0.145**	1.26 (1.00,1.59)**	0.050**
Psychoses	9	0.57 (0.31,1.04)	0.042	0.91 (0.59,1.39)	0.647
Alcohol Dependence	9	0.94 (0.71,1.24)	0.666	1.03 (0.83,1.27)	0.821
Drug Dependence	9	--	--	--	--
Anxiety	9	1.09 (0.90,1.31)	0.393	1.09 (0.94,1.26)	0.256
Other Neuroses	9	1.03 (0.89,1.20)	0.673	1.06 (0.94,1.19)	0.331
Trouble Falling Asleep	9	0.80 (0.60,1.05)	0.100	0.88 (0.71,1.07)	0.192
Waking Up During the Night	9	0.87 (0.69,1.09)	0.212	0.91 (0.77,1.08)	0.270
Waking Up Too Early and Can't Go Back to Sleep	9	0.91 (0.71,1.16)**	0.432**	0.96 (0.79,1.16)	0.668
Waking Up Unrefreshed	9	1.06 (0.85,1.33)	0.613	1.09 (0.91,1.31)	0.336
Involuntarily Falling Asleep During the Day	9	0.84 (0.58,1.22)**	0.349**	1.01 (0.77,1.32)**	0.940**
Great or Disabling Fatigue During the Day	9	0.74 (0.50,1.09)	0.111	0.89 (0.66,1.19)	0.421
Frightening Dreams	9	1.13 (0.81,1.57)**	0.486**	1.27 (0.98,1.65)	0.072
Talking in Sleep	9	1.02 (0.74,1.39)	0.924	1.09 (0.86,1.38)	0.493
Sleepwalking	9	****	****	1.05 (0.75,1.48)	0.779
Abnormal Movement/Activity During the Night	9	0.99 (0.69,1.42)	0.718	1.08 (0.82,1.44)	0.581
Sleep Problems Requiring Medication	9	0.47 (0.23,0.97)	0.023	0.61 (0.38,0.99)	0.032
Snore Loudly in All Sleeping Positions	9	0.95 (0.72,1.24)**	0.694**	1.16 (0.94,1.42)	0.170
Insomnia	9	0.88 (0.74,1.05)	0.154	0.93 (0.81,1.06)	0.253
Overall Sleep Disorder Index	9	0.90 (0.76,1.05)	0.178	0.96 (0.85,1.08)	0.528
SCL-90-R					
Anxiety	9	1.19 (0.91,1.55)	0.217	1.18 (0.96,1.46)	0.122
Depression	9	1.11 (0.86,1.42)	0.438	1.09 (0.89,1.33)	0.393
Hostility	9	0.95 (0.65,1.38)	0.757	1.04 (0.78,1.37)	0.773
Interpersonal Sensitivity	9	1.14 (0.82,1.58)**	0.435**	1.10 (0.86,1.39)	0.458
Obsessive-Compulsive Behavior	9	1.13 (0.87,1.47)	0.359	1.23 (1.00,1.52)	0.054
Paranoid Ideation	9	0.81 (0.54,1.22)	0.293	0.86 (0.64,1.17)	0.324
Phobic Anxiety	9	0.98 (0.73,1.32)	0.912	1.08 (0.86,1.36)	0.493
Psychoticism	9	1.12 (0.86,1.46)	0.397	1.19 (0.98,1.44)	0.089
Somatization	9	1.03 (0.80,1.32)	0.810	1.10 (0.90,1.34)	0.348
Global Severity Index	9	1.10 (0.85,1.42)	0.467	1.12 (0.91,1.36)	0.294
Positive Symptom Total	9	1.12 (0.86,1.47)	0.398	1.08 (0.88,1.34)	0.454
Positive Symptom Distress Index	9	1.02 (0.80,1.29)	0.896	1.14 (0.95,1.37)	0.164
Viral Hepatitis	10	1.19 (1.02,1.40)	0.028	1.24 (1.10,1.39)	<0.001
Viral Hepatitis ^a	10	1.01 (0.85,1.20)	0.912	1.02 (0.89,1.17)	0.777

TABLE Q-13. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	<u>Minimal Assumption</u>		<u>Maximal Assumption</u>	
		Adj. Relative Risk (95% C.I.)	p-Value	Adj. Relative Risk (95% C.I.)	p-Value
Chronic Liver Disease and Cirrhosis (Alcohol-Related)	10	0.76 (0.51,1.13)	0.164	0.85 (0.64,1.12)	0.238
Chronic Liver Disease and Cirrhosis (Nonalcohol-Related)	10	0.59 (0.21,1.69)	0.287	0.79 (0.40,1.56)	0.487
Other Disorders of the Liver	10	1.15 (0.91,1.45)	0.245	1.19 (0.99,1.42)	0.061
Jaundice (Unspecified)	10	1.39 (0.60,3.19)	0.467	0.90 (0.50,1.62)	0.722
Hepatomegaly	10	1.01 (0.62,1.65)	0.954	1.25 (0.87,1.80)	0.248
Ulcer	10	1.14 (0.86,1.52)	0.376	1.18 (0.95,1.46)	0.143
Skin Bruises, Patches, or Sensitivity	10	1.03 (0.87,1.21)	0.753	1.04 (0.92,1.18)	0.508
Current Hepatomegaly	10	0.95 (0.53,1.71)	0.861	1.30 (0.83,2.02)	0.271
AST	10	0.88 (0.62,1.25)**	0.479**	0.96 (0.75,1.23)**	0.737**
ALT	10	1.07 (0.87,1.33)**	0.509**	1.15 (0.98,1.35)**	0.079**
GGT	10	1.10 (0.86,1.41)***	0.437***	1.24 (1.03,1.50)***	0.028***
Alkaline Phosphatase	10	1.16 (0.85,1.58)	0.363	1.19 (0.93,1.52)	0.179
D-Glucaric Acid	10	--	--	--	--
Total Bilirubin	10	0.37 (0.18,0.77)	0.001	0.63 (0.42,0.94)	0.014
Direct Bilirubin	10	0.73 (0.47,1.14)**	0.137**	0.92 (0.68,1.25)**	0.579**
LDH	10	--	--	--	--
Cholesterol	10	0.95 (0.76,1.18)	0.625	0.94 (0.80,1.11)	0.482
HDL	10	1.17 (0.82,1.67)	0.391	1.11 (0.84,1.45)	0.476
Cholesterol-HDL Ratio	10	1.25 (1.07,1.46)	0.004	1.25 (1.12,1.40)***	<0.001***
Triglycerides	10	1.32 (1.04,1.67)	0.026	1.30 (1.09,1.56)	0.005
Creatine Kinase	10	0.74 (0.49,1.10)	0.123	0.79 (0.60,1.04)	0.084
Occurrence of Acne (Lifetime)	11	0.91 (0.78,1.05)	0.188	0.96 (0.86,1.06)	0.406
Acne Relative to SEA Tour (Pre/Post-SEA and Post-SEA vs. Pre-SEA and None)	11	0.93 (0.80,1.08)	0.333	0.98 (0.88,1.09)	0.750
Acne Relative to SEA Tour (Post-SEA vs. None)	11	0.92 (0.79,1.07)	0.292	0.95 (0.85,1.06)	0.353
Acne Relative to SEA Tour (Pre/Post-SEA vs. Pre-SEA)	11	****	****	****	****
Location of Acne (Post-SEA)	11	1.09 (0.81,1.46)**	0.581**	0.94 (0.76,1.16)	0.554
Location of Acne (Pre/Post-SEA and Post-SEA)	11	1.17 (0.92,1.48)	0.207	0.98 (0.82,1.17)	0.808
Comedones	11	1.18 (0.98,1.41)	0.076	1.10 (0.96,1.26)	0.157
Acneiform Lesions	11	0.86 (0.67,1.11)	0.243	1.11 (0.93,1.32)	0.270
Acneiform Scars	11	1.14 (0.91,1.43)	0.273	1.12 (0.94,1.33)	0.200
Depigmentation	11	0.93 (0.69,1.24)	0.606	1.06 (0.86,1.31)	0.581

TABLE Q-13. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption		Maximal Assumption	
		Adj. Relative Risk (95% C.I.)	p-Value	Adj. Relative Risk (95% C.I.)	p-Value
Inclusion Cysts	11	0.93 (0.72,1.19)	0.557	0.85 (0.71,1.02)	0.075
Hyperpigmentation	11	1.15 (0.95,1.40)	0.159	1.25 (1.07,1.45)**	0.005**
Other Abnormalities	11	0.96 (0.81,1.13)	0.616	0.94 (0.83,1.06)	0.308
Dermatology Index	11	1.06 (0.91,1.23)	0.471	1.06 (0.95,1.19)	0.324
Reported/Verified Essential Hypertension	12	1.04 (0.87,1.24)	0.651	1.02 (0.90,1.17)**	0.738**
Reported Heart Disease (Excluding Essential Hypertension)	12	0.94 (0.79,1.13)**	0.505**	0.88 (0.78,1.00)	0.052
Verified Heart Disease (Excluding Essential Hypertension)	12	0.95 (0.79,1.13)**	0.532**	0.88 (0.78,1.00)	0.044
Reported/Verified Myocardial Infarction	12	1.05 (0.71,1.55)	0.807	1.24 (0.93,1.66)	0.154
Systolic Blood Pressure	12	0.93 (0.76,1.15)**	0.503**	1.05 (0.90,1.23)	0.524
Heart Sounds	12	1.03 (0.68,1.57)	0.876	1.07 (0.79,1.46)	0.654
Overall ECG	12	1.05 (0.83,1.33)	0.671	1.07 (0.90,1.26)	0.460
ECG: RBBB	12	--	--	--	--
ECG: LBBB	12	--	--	--	--
ECG: Nonspecific T-Waves	12	0.99 (0.76,1.30)	0.948	1.06 (0.87,1.30)	0.542
ECG: Bradycardia	12	0.80 (0.47,1.36)	0.393	0.75 (0.53,1.07)	0.096
ECG: Arrhythmia	12	1.43 (0.96,2.13)**	0.092**	1.23 (0.91,1.66)	0.186
ECG: Other Diagnoses	12	0.90 (0.71,1.15)	0.396	0.93 (0.78,1.09)	0.365
Diastolic Blood Pressure	12	0.85 (0.58,1.25)	0.394	1.04 (0.80,1.35)	0.751
Funduscopic Examination	12	--	--	--	--
Carotid Bruits	12	0.62 (0.16,2.45)	0.446	0.86 (0.39,1.86)	0.686
Radial Pulses	12	--	--	--	--
Femoral Pulses	12	1.01 (0.55,1.86)**	0.984**	1.11 (0.69,1.78)**	0.683**
Popliteal Pulses	12	0.72 (0.40,1.28)	0.230	1.03 (0.71,1.51)	0.865
Dorsalis Pedis Pulses	12	1.20 (0.94,1.53)**	0.153**	1.21 (1.01,1.46)	0.041
Posterior Tibial Pulses	12	1.02 (0.64,1.65)	0.921	1.38 (0.97,1.98)	0.086
Posterior Tibial Pulses ^b	12	1.04 (0.65,1.66)	0.886	1.34 (0.93,1.91)	0.124
Leg Pulses	12	1.13 (0.90,1.42)**	0.289**	1.22 (1.03,1.45)	0.021
Peripheral/All Pulses	12	1.12 (0.89,1.40)**	0.349**	1.22 (1.03,1.44)	0.025
Red Blood Cell Count	13	1.34 (0.88,2.03)	0.193	1.23 (0.88,1.71)	0.234
Hematocrit	13	1.03 (0.59,1.82)	0.910	1.14 (0.75,1.73)	0.556
Mean Corpuscular Volume	13	1.00 (0.80,1.26)**	0.970**	1.17 (0.98,1.39)**	0.087**
Mean Corpuscular Hemoglobin	13	1.13 (0.87,1.46)	0.376	1.12 (0.92,1.36)**	0.261**
Platelet Count	13	1.20 (0.80,1.80)	0.398	1.28 (0.94,1.76)	0.133
Prothrombin Time	13	1.31 (0.85,2.02)	0.245	1.05 (0.75,1.47)	0.789
Kidney Disease	14	0.99 (0.78,1.26)	0.942	1.01 (0.85,1.20)	0.927
Urinary Protein	14	0.93 (0.66,1.31)	0.664	0.95 (0.74,1.23)	0.709
Urinary Occult Blood	14	1.22 (0.94,1.57)	0.138	1.22 (1.01,1.47)	0.047
Urinary White Blood Cell Count	14	1.08 (0.82,1.41)**	0.592**	1.07 (0.88,1.31)**	0.500**

TABLE Q-13. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 1: Ranch Hands - Log₂ (Initial Dioxin)

Clinical Parameter	Reference Chapter	Minimal Assumption		Maximal Assumption	
		Adj. Relative Risk (95% C.I.)	p-Value	Adj. Relative Risk (95% C.I.)	p-Value
Current Thyroid Function	15	0.84 (0.54,1.31)	0.439	0.87 (0.65,1.18)	0.363
History of Thyroid Disease	15	1.13 (0.78,1.64)	0.519	1.05 (0.80,1.37)	0.722
Thyroid Gland	15	0.98 (0.82,1.15)	0.771	1.05 (0.93,1.19)	0.436
Testes	15	1.61 (1.11,2.33)	0.017	1.61 (1.20,2.18)	0.003
T ₃ % Uptake	15	0.79 (0.48,1.28)	0.312	0.80 (0.59,1.10)	0.158
TSH	15	1.23 (0.79,1.94)	0.373	1.05 (0.75,1.48)	0.765
Testosterone	15	0.87 (0.53,1.43)	0.568	1.04 (0.71,1.52)	0.846
Fasting Glucose	15	1.45 (1.18,1.77)	<0.001	1.48 (1.26,1.74)	<0.001
Composite Diabetes Indicator	15	1.46 (1.17,1.82)	0.001	1.48 (1.23,1.77)	<0.001
Composite Skin Test Diagnosis	16	0.78 (0.53,1.15)	0.201	0.85 (0.66,1.10)	0.207
Asthma	17	****	****	0.85 (0.62,1.16)**	0.290**
Bronchitis	17	0.88 (0.70,1.11)	0.277	0.86 (0.73,1.01)	0.062
Pleurisy	17	1.41 (0.96,2.07)	0.090	1.25 (0.93,1.68)	0.158
Pneumonia	17	0.96 (0.72,1.29)	0.791	0.93 (0.75,1.15)	0.489
Tuberculosis	17	0.83 (0.51,1.37)	0.458	0.86 (0.60,1.24)	0.419
Thorax and Lung Abnormalities	17	1.27 (0.97,1.65)	0.088	1.29 (1.04,1.60)	0.022
Hyperresonance	17	1.29 (0.89,1.86)	0.186	1.30 (0.98,1.73)	0.076
Dullness	17	1.93 (0.82,4.57)	0.158	2.52 (0.99,6.42)	0.051
Wheezes	17	1.53 (1.05,2.23)	0.034	1.42 (1.04,1.94)	0.034
Rales	17	1.52 (0.90,2.57)	0.142	1.38 (0.89,2.14)	0.171
X-Ray Interpretation	17	1.04 (0.74,1.47)	0.823	1.06 (0.82,1.38)	0.642

^aAnalysis performed for model including occupation.

^bAnalysis performed for model excluding percent body fat.

^{**}Log₂ (initial dioxin)-by-covariate interaction ($0.01 < p \leq 0.05$); adjusted relative risk, confidence interval, and p-value derived from a model fitted after deletion of this interaction.

^{***}Log₂ (initial dioxin)-by-covariate interaction ($p \leq 0.01$); adjusted relative risk, confidence interval, and p-value derived from a model fitted after deletion of this interaction.

^{****}Log₂ (initial dioxin)-by-covariate interaction ($p \leq 0.01$); adjusted relative risk, confidence interval, and p-value not presented.

Note: Estimated relative risk for a twofold increase in dioxin.

TABLE Q-14.

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Self-Perception of Health	6	****	≤18.6 >18.6	**** ****	**** ****	****	≤18.6 >18.6	**** ****	**** ****
Appearance of Illness or Distress by Physician	6	0.203	≤18.6 >18.6	0.28 (0.01,10.02) 1.71 (0.68,4.30)	0.488 0.253	0.396	≤18.6 >18.6	0.88 (0.16,4.80) 1.88 (0.82,4.30)	0.880 0.138
Relative Age	6	0.039	≤18.6 >18.6	1.73 (1.06,2.81) 0.86 (0.53,1.38)	0.027 0.526	0.026	≤18.6 >18.6	1.42 (0.98,2.05) 0.81 (0.56,1.15)	0.066 0.238
Percent Body Fat	6	0.755	≤18.6 >18.6	1.21 (0.92,1.59) 1.28 (1.02,1.59)	0.176 0.029	0.299	≤18.6 >18.6	1.48 (1.20,1.81) 1.29 (1.09,1.52)	<0.001 0.003
Sedimentation Rate	6	0.337	≤18.6 >18.6	0.93 (0.54,1.61) 1.25 (0.92,1.71)	0.808 0.154	0.263	≤18.6 >18.6	1.10 (0.75,1.62) 1.42 (1.10,1.83)	0.619 0.007
All Skin Neoplasms	7	0.604	≤18.6 >18.6	0.70 (0.48,1.02) 0.80 (0.59,1.08)	0.065 0.142	0.286	≤18.6 >18.6	0.86 (0.67,1.10) 1.02 (0.82,1.28)	0.224 0.835
Malignant Skin Neoplasms	7	0.335	≤18.6 >18.6	0.70 (0.42,1.16) 0.96 (0.63,1.47)	0.167 0.851	0.743	≤18.6 >18.6	0.88 (0.63,1.22) 0.95 (0.68,1.31)	0.433 0.740
Benign Skin Neoplasms (Non-Blacks only)	7	0.985	≤18.6 >18.6	0.89 (0.52,1.51) 0.89 (0.62,1.28)	0.661 0.541	0.165	≤18.6 >18.6	0.80 (0.56,1.14) 1.09 (0.84,1.43)	0.220 0.516
Benign Skin Neoplasms (Blacks Included)	7	0.866	≤18.6 >18.6	0.85 (0.51,1.45) 0.90 (0.63,1.29)	0.559 0.573	0.154	≤18.6 >18.6	0.80 (0.55,1.14) 1.09 (0.84,1.43)	0.213 0.498

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TABLE Q-14. (Continued)

**Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time**

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Skin Neoplasms of Uncertain Behavior or Unspecified Nature	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
<u>Basal Cell Carcinoma</u>	7	0.759	≤18.6 >18.6	0.77 (0.46,1.28) 0.86 (0.53,1.39)	0.312 0.526	0.725	≤18.6 >18.6	0.87 (0.68,1.12) 0.95 (0.74,1.21)	0.280 0.623
Ear, Face, Head, and Neck	7	0.349	≤18.6 >18.6	0.69 (0.34,1.39) 0.41 (0.17,0.99)	0.296 0.047	0.776	≤18.6 >18.6	0.82 (0.52,1.28) 0.74 (0.45,1.23)	0.375 0.246
Trunk	7	0.804	≤18.6 >18.6	1.19 (0.57,2.50) 1.05 (0.51,2.17)	0.646 0.901	0.887	≤18.6 >18.6	1.19 (0.69,2.06) 1.13 (0.63,2.01)	0.526 0.687
Upper Extremities	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- 0.15 (0.01,1.81)	-- 0.136
Lower Extremities	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Other Sites	7	--	≤18.6 >18.6	-- 1.32 (0.58,2.99)	-- 0.509	--	≤18.6 >18.6	-- 1.57 (0.78,3.16)	-- 0.209
<u>Sun Exposure-Related Malignant Skin Neoplasms</u>	7	0.452	≤18.6 >18.6	0.72 (0.43,1.20) 0.93 (0.59,1.45)	0.207 0.739	0.992	≤18.6 >18.6	0.96 (0.69,1.33) 0.96 (0.69,1.32)	0.784 0.782
Ear, Face, Head, and Neck	7	0.854	≤18.6 >18.6	0.65 (0.33,1.29) 0.60 (0.30,1.18)	0.223 0.140	0.954	≤18.6 >18.6	0.86 (0.56,1.31) 0.84 (0.54,1.32)	0.479 0.455

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Trunk	7	0.927	≤18.6 >18.6	0.92 (0.42,2.00) 0.88 (0.42,1.84)	0.833 0.727	0.800	≤18.6 >18.6	1.13 (0.67,1.91) 1.02 (0.58,1.81)	0.649 0.938
Upper Extremities	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- 0.76 (0.33,1.74)	-- 0.516
Lower Extremities	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Other Sites	7	--	≤18.6 >18.6	-- 1.32 (0.58,2.99)	-- 0.509	--	≤18.6 >18.6	-- 1.57 (0.78,3.16)	-- 0.209
Melanoma	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Ear, Face, Head, and Neck	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Trunk	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Upper Extremities	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Lower Extremities	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Other Sites	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Squamous Cell Carcinoma	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
<u>Basal Cell Carcinoma by Occupation</u>									
Officer-Ear, Face, Head, and Neck vs. None	7	0.767	≤18.6 >18.6	0.32 (0.00,43.41) 0.69 (0.07,6.71)	0.647 0.751	0.947	≤18.6 >18.6	1.20 (0.31,4.65) 1.27 (0.37,4.42)	0.796 0.705
Officer-Other Sites vs. None	7	--	≤18.6 >18.6	-- --	-- --	0.542	≤18.6 >18.6	0.26 (0.02,4.10) 0.69 (0.12,3.89)	0.337 0.676
Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7	--	≤18.6 >18.6	1.35 (0.41,4.46) --	0.624 --	--	≤18.6 >18.6	0.63 (0.24,1.65) --	0.352 --
Enlisted Flyer-Other Sites vs. None	7	0.017	≤18.6 >18.6	1.19 (0.34,4.20) 37.64 (0.92,1,541.9)	0.781 0.055	0.027	≤18.6 >18.6	1.60 (0.60,4.27) 37.64 (0.92,1,543.3)	0.348 0.056
Enlisted Groundcrew-Ear, Face, Head, and Neck vs. None	7	0.714	≤18.6 >18.6	0.31 (0.09,1.10) 0.42 (0.15,1.20)	0.069 0.107	0.385	≤18.6 >18.6	0.51 (0.23,1.12) 0.80 (0.42,1.53)	0.092 0.492
Enlisted Groundcrew-Other Sites vs. None	7	0.976	≤18.6 >18.6	0.61 (0.23,1.58) 0.62 (0.18,2.13)	0.305 0.448	0.874	≤18.6 >18.6	0.85 (0.42,1.74) 0.94 (0.39,2.25)	0.666 0.883

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
<u>Sun Exposure-Related Malignant Skin Neoplasm by Occupation</u>									
Officer-Ear, Face, Head, and Neck vs. None	7	0.660	≤18.6 >18.6	0.15 (0.00,22.45) 0.48 (0.04,5.50)	0.454 0.553	0.580	≤18.6 >18.6	1.55 (0.40,6.01) 0.93 (0.28,3.12)	0.522 0.907
Officer-Other Sites vs. None	7	--	≤18.6 >18.6	-- --	-- --	0.811	≤18.6 >18.6	0.52 (0.07,3.87) 0.71 (0.15,3.49)	0.527 0.677
Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7	--	≤18.6 >18.6	1.19 (0.39,3.63) --	0.764 --	--	≤18.6 >18.6	0.62 (0.24,1.59) --	0.318 --
Enlisted Flyer-Other Sites vs. None	7	0.017	≤18.6 >18.6	1.18 (0.34,4.12) 37.63 (0.92,1,545.8)	0.794 0.056	0.026	≤18.6 >18.6	1.59 (0.60,4.22) 37.63 (0.92,1,546.2)	0.349 0.056
Enlisted Groundcrew-Ear, Face, Head, and Neck vs. None	7	0.336	≤18.6 >18.6	0.32 (0.09,1.08) 0.63 (0.29,1.37)	0.066 0.242	0.221	≤18.6 >18.6	0.54 (0.25,1.18) 0.97 (0.55,1.70)	0.123 0.913
Enlisted Groundcrew-Other Sites vs. None	7	0.967	≤18.6 >18.6	0.61 (0.23,1.58) 0.63 (0.18,2.15)	0.305 0.458	0.866	≤18.6 >18.6	0.85 (0.42,1.74) 0.94 (0.39,2.26)	0.666 0.893

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TABLE Q-14. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Basal Cell Carcinoma (One vs. None)	7	0.967	≤18.6 >18.6	0.80 (0.47,1.37) 0.82 (0.49,1.35)	0.418 0.428	0.776	≤18.6 >18.6	0.99 (0.68,1.43) 0.92 (0.63,1.34)	0.949 0.652
Basal Cell Carcinoma (Multiple vs. None)	7	0.911	≤18.6 >18.6	0.66 (0.20,2.22) 0.61 (0.22,1.65)	0.506 0.327	0.772	≤18.6 >18.6	0.79 (0.37,1.68) 0.92 (0.49,1.73)	0.546 0.788
All Systemic Neoplasms	7	0.635	≤18.6 >18.6	1.14 (0.74,1.76) 1.29 (0.95,1.75)	0.565 0.105	0.564	≤18.6 >18.6	1.42 (1.02,1.98) 1.26 (0.99,1.62)	0.036 0.065
Malignant Systemic Neoplasms	7	0.899	≤18.6 >18.6	0.66 (0.22,1.94) 0.60 (0.23,1.59)	0.448 0.302	0.317	≤18.6 >18.6	1.24 (0.63,2.44) 0.78 (0.41,1.47)	0.525 0.440
Benign Systemic Neoplasms	7	0.610	≤18.6 >18.6	1.26 (0.79,2.00) 1.45 (1.04,2.02)	0.340 0.026	0.964	≤18.6 >18.6	1.50 (1.04,2.17) 1.52 (1.15,2.00)	0.030 0.003
Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Systemic Neoplasms: Location/Site									
Ear, Face, Head, and Neck	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Oral Cavity, Pharynx, and Larynx	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Brain	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Thymus and Mediastinum	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Thyroid Gland	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Bronchus and Lung	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Colon and Rectum	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Kidney and Bladder	7	--	≤18.6 >18.6	-- 0.56 (0.13,2.41)	-- 0.435	--	≤18.6 >18.6	-- 0.67 (0.27,1.62)	-- 0.372
Prostate	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Testicles	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Ill-Defined Sites	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Carcinoma in Situ of Penis	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --

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TABLE Q-14. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Carcinoma in Situ of Other and Unspecified Sites	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Hodgkin's Disease	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Leukemia	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Other Malignant Neoplasms of Lymphoid and Histiocytic Tissue	7	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
All Skin and Systemic Neoplasms	7	0.625	≤18.6 >18.6	0.92 (0.68,1.25) 1.01 (0.80,1.27)	0.579 0.953	0.387	≤18.6 >18.6	1.02 (0.82,1.26) 1.15 (0.96,1.37)	0.872 0.132
Inflammatory Diseases	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Hereditary and Degenerative Diseases	8	0.492	≤18.6 >18.6	0.83 (0.45,1.54) 1.09 (0.66,1.78)	0.561 0.736	0.943	≤18.6 >18.6	1.01 (0.66,1.54) 1.03 (0.70,1.51)	0.972 0.887
Peripheral Disorders	8	0.199	≤18.6 >18.6	0.86 (0.59,1.25) 1.14 (0.88,1.49)	0.421 0.315	0.263	≤18.6 >18.6	0.96 (0.74,1.23) 1.15 (0.94,1.41)	0.732 0.186
Disorders of the Eye	8	0.956	≤18.6 >18.6	1.10 (0.81,1.48) 1.11 (0.86,1.43)	0.546 0.423	0.844	≤18.6 >18.6	1.10 (0.89,1.36) 1.13 (0.93,1.37)	0.391 0.225

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Tympanic Membrane Disorder	8	0.419	≤18.6 >18.6	1.14 (0.61,2.11) 0.84 (0.56,1.26)	0.681 0.406	0.817	≤18.6 >18.6	1.05 (0.67,1.65) 0.99 (0.73,1.33)	0.830 0.929
Otitis	8	0.852	≤18.6 >18.6	0.96 (0.54,1.69) 1.02 (0.76,1.35)	0.886 0.905	0.031	≤18.6 >18.6	0.64 (0.43,0.93) 1.00 (0.81,1.24)	0.020 0.973
Hearing Loss	8	0.748	≤18.6 >18.6	1.14 (0.87,1.51) 1.21 (0.95,1.55)	0.347 0.125	0.690	≤18.6 >18.6	1.09 (0.91,1.32) 1.04 (0.87,1.24)	0.345 0.674
Other Neurological Disorders	8	0.453	≤18.6 >18.6	1.35 (1.01,1.79) 1.18 (0.94,1.47)	0.041 0.156	0.082	≤18.6 >18.6	1.58 (1.27,1.96) 1.24 (1.05,1.48)	<0.001 0.014
Other Neurological Disorders ^b	8	0.303	≤18.6 >18.6	1.11 (0.82,1.50) 0.90 (0.70,1.16)	0.518 0.432	0.133	≤18.6 >18.6	1.21 (0.95,1.53) 0.97 (0.80,1.17)	0.116 0.725
Smell	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Visual Fields	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Light Reaction	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Ocular Movement	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Facial Sensation	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Smile	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Palpebral Fissure	8	0.453	≤18.6 >18.6	0.74 (0.18,3.08) 1.27 (0.71,2.26)	0.681 0.423	0.229	≤18.6 >18.6	0.66 (0.24,1.76) 1.22 (0.75,2.00)	0.403 0.420
Balance	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Speech	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Neck Range of Motion	8	0.257	≤18.6 >18.6	1.06 (0.65,1.71) 1.45 (1.07,1.96)	0.824 0.017	0.026	≤18.6 >18.6	0.83 (0.59,1.16) 1.30 (1.03,1.65)	0.270 0.029
Cranial Nerve Index	8	0.225	≤18.6 >18.6	1.00 (0.65,1.52) 1.34 (1.02,1.74)	0.986 0.033	0.023	≤18.6 >18.6	0.84 (0.63,1.12) 1.25 (1.02,1.54)	0.236 0.034
Cranial Nerve Index Without Range of Motion	8	0.612	≤18.6 >18.6	0.87 (0.44,1.71) 1.06 (0.69,1.63)	0.687 0.783	0.509	≤18.6 >18.6	0.92 (0.58,1.44) 1.10 (0.79,1.54)	0.710 0.562
Pin Prick	8	0.184**	≤18.6 >18.6	0.89 (0.55,1.46)** 1.33 (0.91,1.95)**	0.649** 0.137**	0.970**	≤18.6 >18.6	1.12 (0.80,1.57)** 1.13 (0.84,1.52)**	0.500** 0.406**
Light Touch	8	0.048	≤18.6 >18.6	0.62 (0.30,1.30) 1.39 (0.86,2.24)	0.207 0.182	0.397	≤18.6 >18.6	0.85 (0.54,1.36) 1.08 (0.77,1.53)	0.504 0.648
Muscle Status	8	0.710	≤18.6 >18.6	1.28 (0.59,2.79) 1.05 (0.48,2.31)	0.533 0.908	0.422	≤18.6 >18.6	1.55 (0.83,2.90) 1.10 (0.59,2.03)	0.167 0.766
Vibration	8	0.897	≤18.6 >18.6	0.82 (0.25,2.71) 0.75 (0.36,1.59)	0.751 0.457	0.900	≤18.6 >18.6	1.11 (0.50,2.48) 1.05 (0.62,1.77)	0.794 0.862
Patellar Reflex	8	0.738	≤18.6 >18.6	1.19 (0.49,2.93) 0.99 (0.52,1.91)	0.700 0.983	0.535	≤18.6 >18.6	1.52 (0.75,3.11) 1.18 (0.72,1.96)	0.248 0.510

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Achilles Reflex	8	0.064	≤18.6 >18.6	0.61 (0.33,1.15) 1.17 (0.79,1.74)	0.126 0.425	0.243	≤18.6 >18.6	0.99 (0.65,1.50) 1.33 (0.97,1.81)	0.950 0.073
Biceps Reflex	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Babinski Reflex	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Tremor	8	0.409	≤18.6 >18.6	1.35 (0.67,2.75) 0.92 (0.49,1.73)	0.404 0.789	0.102**	≤18.6 >18.6	1.53 (0.89,2.63)** 0.85 (0.54,1.37)**	0.126 0.512
Coordination	8	0.257	≤18.6 >18.6	2.14 (0.94,4.91) 1.14 (0.52,2.51)	0.071 0.748	0.086	≤18.6 >18.6	2.53 (1.16,5.48) 1.11 (0.58,2.11)	0.019 0.758
Romberg Sign	8	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Gait	8	0.901	≤18.6 >18.6	1.14 (0.47,2.75) 1.07 (0.67,1.73)	0.768 0.771	0.949	≤18.6 >18.6	1.21 (0.61,2.40) 1.18 (0.81,1.73)	0.577 0.379
CNS Index	8	0.372	≤18.6 >18.6	1.47 (0.88,2.43) 1.11 (0.75,1.63)	0.137 0.607	0.165	≤18.6 >18.6	1.55 (1.05,2.31) 1.10 (0.82,1.48)	0.029 0.511
Psychoses	9	0.332	≤18.6 >18.6	0.75 (0.37,1.53) 0.37 (0.10,1.41)	0.425 0.146	0.403	≤18.6 >18.6	1.11 (0.65,1.89) 0.75 (0.34,1.65)	0.710 0.470
Alcohol Dependence	9	0.375	≤18.6 >18.6	1.09 (0.69,1.71) 0.83 (0.57,1.21)	0.726 0.329	0.199	≤18.6 >18.6	1.16 (0.82,1.64) 0.87 (0.66,1.14)	0.403 0.320
Drug Dependence	9	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Anxiety	9	0.809	≤18.6 >18.6	1.10 (0.82,1.48) 1.15 (0.89,1.50)	0.522 0.279	0.399	≤18.6 >18.6	1.18 (0.95,1.48) 1.04 (0.85,1.28)	0.131 0.679
Other Neuroses	9	0.282	≤18.6 >18.6	1.15 (0.90,1.47) 0.97 (0.79,1.19)	0.252 0.765	0.112	≤18.6 >18.6	1.18 (0.98,1.41) 0.97 (0.83,1.14)	0.075 0.731
Trouble Falling Asleep	9	0.674	≤18.6 >18.6	0.74 (0.49,1.11) 0.83 (0.56,1.23)	0.148 0.352	0.359	≤18.6 >18.6	0.95 (0.71,1.27) 0.79 (0.59,1.07)	0.743 0.123
Waking Up During the Night	9	****	≤18.6 >18.6	**** ****	**** ****	****	≤18.6 >18.6	**** ****	**** ****
Waking Up Too Early and Can't Go Back to Sleep	9	0.336	≤18.6 >18.6	1.08 (0.75,1.54) 0.85 (0.61,1.18)	0.688 0.327	0.406	≤18.6 >18.6	1.07 (0.82,1.40) 0.91 (0.70,1.20)	0.617 0.518
Waking Up Unrefreshed	9	0.413**	≤18.6 >18.6	0.86 (0.56,1.32)** 1.06 (0.80,1.39)**	0.484** 0.705**	0.428	≤18.6 >18.6	0.96 (0.71,1.30) 1.11 (0.88,1.40)	0.783 0.364
Involuntarily Falling Asleep During the Day	9	0.152	≤18.6 >18.6	1.14 (0.67,1.92) 0.64 (0.35,1.18)	0.627 0.153	0.084	≤18.6 >18.6	1.28 (0.87,1.89) 0.78 (0.51,1.19)	0.208 0.248
Great or Disabling Fatigue During the Day	9	****	≤18.6 >18.6	**** ****	**** ****	0.320	≤18.6 >18.6	1.02 (0.66,1.57) 0.75 (0.49,1.16)	0.945 0.193
Frightening Dreams	9	****	≤18.6 >18.6	**** ****	**** ****	0.528**	≤18.6 >18.6	1.50 (1.03,2.17)** 1.26 (0.85,1.88)**	0.033** 0.247**
Talking in Sleep	9	0.860	≤18.6 >18.6	1.09 (0.68,1.74) 1.03 (0.66,1.60)	0.727 0.904	0.787	≤18.6 >18.6	1.16 (0.82,1.63) 1.08 (0.76,1.55)	0.406 0.662

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Sleepwalking	9	0.111	≤18.6 >18.6	0.66 (0.31,1.37) 1.39 (0.75,2.56)	0.260 0.291	0.941	≤18.6 >18.6	1.03 (0.63,1.68) 1.05 (0.64,1.73)	0.915 0.838
Abnormal Movement/ Activity During the Night	9	0.499	≤18.6 >18.6	1.08 (0.62,1.86) 0.87 (0.50,1.48)	0.791 0.600	0.793	≤18.6 >18.6	1.07 (0.72,1.60) 1.16 (0.76,1.76)	0.732 0.496
Sleep Problems Requiring Medi- cation	9	0.681	≤18.6 >18.6	0.26 (0.05,1.26) 0.38 (0.14,1.04)	0.095 0.060	0.968	≤18.6 >18.6	0.53 (0.23,1.21) 0.54 (0.29,1.03)	0.132 0.064
Snore Loudly in All Sleeping Positions	9	0.692	≤18.6 >18.6	0.99 (0.61,1.59) 0.88 (0.63,1.22)	0.960 0.443	0.653	≤18.6 >18.6	1.20 (0.84,1.71) 1.09 (0.84,1.40)	0.309 0.511
Insomnia	9	0.347	≤18.6 >18.6	1.00 (0.76,1.30) 0.84 (0.65,1.08)	0.978 0.165	0.058	≤18.6 >18.6	1.07 (0.88,1.30) 0.83 (0.68,1.00)	0.502 0.051
Overall Sleep Disorder Index	9	0.274	≤18.6 >18.6	0.99 (0.77,1.28) 0.83 (0.67,1.03)	0.950 0.091	0.147	≤18.6 >18.6	1.05 (0.88,1.26) 0.89 (0.75,1.04)	0.562 0.150
SCL-90-R									
Anxiety	9	0.099	≤18.6 >18.6	0.95 (0.61,1.49) 1.51 (1.05,2.19)	0.827 0.028	0.851	≤18.6 >18.6	1.17 (0.85,1.62) 1.22 (0.92,1.63)	0.335 0.172
Depression	9	0.284	≤18.6 >18.6	0.98 (0.65,1.47) 1.30 (0.92,1.85)	0.918 0.137	0.916	≤18.6 >18.6	1.17 (0.86,1.57) 1.14 (0.87,1.49)	0.315 0.333
Hostility	9	0.803	≤18.6 >18.6	0.89 (0.50,1.60) 0.97 (0.58,1.63)	0.700 0.907	0.510	≤18.6 >18.6	1.10 (0.73,1.66) 0.92 (0.62,1.35)	0.658 0.654
Interpersonal Sensitivity	9	0.354	≤18.6 >18.6	1.38 (0.91,2.10) 1.04 (0.66,1.63)	0.128 0.878	0.260	≤18.6 >18.6	1.36 (0.98,1.90) 1.03 (0.71,1.49)	0.064 0.865

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	C*T ^a	Minimal Assumption			Maximal Assumption			
			Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Obsessive-Compulsive Behavior	9	0.350	≤18.6 >18.6	0.95 (0.61,1.46) 1.23 (0.86,1.74)	0.806 0.253	0.852	≤18.6 >18.6	1.25 (0.90,1.74) 1.20 (0.91,1.59)	0.188 0.199
Paranoid Ideation	9	0.546	≤18.6 >18.6	0.95 (0.57,1.61) 0.72 (0.34,1.54)	0.860 0.402	0.191	≤18.6 >18.6	1.12 (0.77,1.64) 0.73 (0.42,1.27)	0.550 0.263
Phobic Anxiety	9	0.283**	≤18.6 >18.6	0.86 (0.52,1.41)** 1.20 (0.81,1.78)**	0.547** 0.365**	0.705**	≤18.6 >18.6	1.13 (0.79,1.62)** 1.03 (0.76,1.41)**	0.509** 0.841**
Psychoticism	9	0.967	≤18.6 >18.6	1.08 (0.70,1.67) 1.09 (0.76,1.57)	0.731 0.632	0.882	≤18.6 >18.6	1.20 (0.87,1.65) 1.16 (0.90,1.49)	0.272 0.241
Somatization	9	0.025	≤18.6 >18.6	0.73 (0.46,1.15) 1.33 (0.96,1.84)	0.175 0.084	0.608**	≤18.6 >18.6	1.02 (0.74,1.41)** 1.13 (0.88,1.46)**	0.916** 0.349**
Global Severity Index	9	0.338**	≤18.6 >18.6	1.02 (0.67,1.55)** 1.33 (0.93,1.89)**	0.915** 0.122**	0.886	≤18.6 >18.6	1.14 (0.84,1.55) 1.11 (0.84,1.46)	0.405 0.471
Positive Symptom Total	9	0.966	≤18.6 >18.6	1.17 (0.77,1.76) 1.18 (0.81,1.72)	0.462 0.388	0.401	≤18.6 >18.6	1.21 (0.89,1.65) 1.01 (0.75,1.36)	0.233 0.951
Positive Symptom Distress Index	9	0.518	≤18.6 >18.6	0.93 (0.63,1.36) 1.10 (0.79,1.51)	0.705 0.581	0.796	≤18.6 >18.6	1.17 (0.89,1.55) 1.12 (0.87,1.44)	0.254 0.392
Viral Hepatitis	10	0.370	≤18.6 >18.6	1.30 (1.00,1.68) 1.12 (0.91,1.38)	0.046 0.267	0.224	≤18.6 >18.6	1.33 (1.11,1.60) 1.15 (0.98,1.35)	0.002 0.080
Viral Hepatitis ^b	10	0.342	≤18.6 >18.6	1.09 (0.83,1.44) 0.93 (0.74,1.17)	0.531 0.522	0.360	≤18.6 >18.6	1.07 (0.88,1.31) 0.96 (0.80,1.14)	0.503 0.612

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Chronic Liver Disease and Cirrhosis (Alcohol-Related)	10	0.200	≤18.6 >18.6	1.08 (0.57,2.06) 0.64 (0.39,1.06)	0.810 0.082	0.199	≤18.6 >18.6	1.05 (0.67,1.64) 0.72 (0.50,1.05)	0.827 0.087
Chronic Liver Disease and Cirrhosis (Nonalcohol-Related)	10	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Other Disorders of the Liver	10	0.547	≤18.6 >18.6	1.20 (0.78,1.83) 1.02 (0.76,1.38)	0.408 0.873	0.329	≤18.6 >18.6	1.26 (0.92,1.73) 1.04 (0.83,1.31)	0.150 0.716
Jaundice (Unspecified)	10	0.454	≤18.6 >18.6	1.25 (0.31,5.14) 2.44 (0.74,8.09)	0.754 0.144	0.396	≤18.6 >18.6	1.20 (0.46,3.11) 0.69 (0.29,1.62)	0.711 0.390
Hepatomegaly	10	0.964	≤18.6 >18.6	1.17 (0.58,2.38) 1.16 (0.58,2.31)	0.665 0.682	0.298	≤18.6 >18.6	1.67 (0.97,2.87) 1.12 (0.65,1.93)	0.065 0.678
Ulcer	10	0.875	≤18.6 >18.6	1.12 (0.67,1.89) 1.07 (0.74,1.53)	0.661 0.720	0.840	≤18.6 >18.6	1.16 (0.81,1.66) 1.10 (0.83,1.46)	0.430 0.487
Skin Bruises, Patches, or Sensitivity	10	0.569	≤18.6 >18.6	1.12 (0.86,1.46) 1.02 (0.82,1.27)	0.403 0.880	0.741	≤18.6 >18.6	1.16 (0.81,1.66) 1.10 (0.83,1.46)	0.430 0.487
Current Hepatomegaly	10	0.939	≤18.6 >18.6	1.13 (0.51,2.51) 1.08 (0.44,2.67)	0.755 0.861	0.756	≤18.6 >18.6	1.59 (0.86,2.94) 1.37 (0.67,2.81)	0.137 0.389
AST	10	0.368	≤18.6 >18.6	0.65 (0.30,1.39) 0.95 (0.63,1.42)	0.263 0.789	0.922	≤18.6 >18.6	0.88 (0.54,1.44) 0.90 (0.66,1.23)	0.607 0.527

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TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
ALT	10	0.230	≤18.6 >18.6	1.26 (0.89,1.78) 0.96 (0.73,1.28)	0.197 0.799	0.248	≤18.6 >18.6	1.27 (0.99,1.63) 1.05 (0.85,1.30)	0.062 0.651
GGT	10	0.695	≤18.6 >18.6	1.03 (0.68,1.57) 0.93 (0.67,1.28)	0.888 0.656	0.410	≤18.6 >18.6	1.34 (0.99,1.81) 1.14 (0.89,1.45)	0.061 0.308
Alkaline Phosphatase	10	0.407	≤18.6 >18.6	0.88 (0.46,1.71) 1.21 (0.83,1.75)	0.715 0.318	0.281	≤18.6 >18.6	1.01 (0.65,1.58) 1.35 (1.01,1.82)	0.952 0.046
D-Glucaric Acid	10	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Total Bilirubin	10	0.227	≤18.6 >18.6	0.48 (0.17,1.34) 0.18 (0.05,0.64)	0.159 0.008	0.934	≤18.6 >18.6	0.62 (0.33,1.17) 0.60 (0.34,1.06)	0.139 0.076
Direct Bilirubin	10	0.980**	≤18.6 >18.6	0.74 (0.37,1.47)** 0.75 (0.41,1.38)**	0.388** 0.351**	0.656	≤18.6 >18.6	1.02 (0.64,1.61) 0.88 (0.56,1.39)	0.936 0.586
LDH	10	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Cholesterol	10	****	≤18.6 >18.6	**** ****	**** ****	0.872	≤18.6 >18.6	0.93 (0.72,1.19) 0.95 (0.76,1.19)	0.560 0.672
HDL	10	0.648	≤18.6 >18.6	1.23 (0.64,2.35) 1.02 (0.65,1.60)	0.538 0.936	0.578	≤18.6 >18.6	0.98 (0.61,1.57) 1.16 (0.82,1.64)	0.937 0.413
Cholesterol-HDL Ratio	10	0.119**	≤18.6 >18.6	1.07 (0.84,1.37)** 1.38 (1.11,1.70)**	0.582** 0.003**	0.283	≤18.6 >18.6	1.14 (0.96,1.36) 1.29 (1.11,1.51)	0.132 0.001
Triglycerides	10	0.862	≤18.6 >18.6	1.27 (0.86,1.87) 1.32 (0.97,1.81)	0.238 0.078	0.812	≤18.6 >18.6	1.34 (1.00,1.79) 1.28 (1.00,1.63)	0.050 0.052

TABLE Q-14. (Continued)

**Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time**

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Creatine Kinase	10	0.119	≤18.6 >18.6	0.48 (0.22,1.06) 0.98 (0.58,1.64)	0.070 0.925	0.677	≤18.6 >18.6	0.74 (0.47,1.15) 0.84 (0.57,1.23)	0.182 0.363
Occurrence of Acne (Lifetime)	11	0.131	≤18.6 >18.6	1.10 (0.86,1.41) 0.87 (0.71,1.06)	0.447 0.171	0.006	≤18.6 >18.6	1.17 (0.98,1.39) 0.85 (0.73,0.99)	0.078 0.040
Acne Relative to SEA Tour (Pre/Post-SEA and Post-SEA vs. Pre-SEA and None)	11	0.062	≤18.6 >18.6	1.21 (0.95,1.55) 0.91 (0.75,1.10)	0.116 0.318	0.001	≤18.6 >18.6	1.23 (1.04,1.46) 0.86 (0.74,0.99)	0.019 0.043
Acne Relative to SEA Tour (Post-SEA vs. None)	11	0.101	≤18.6 >18.6	1.13 (0.88,1.47) 0.86 (0.70,1.06)	0.340 0.157	0.006	≤18.6 >18.6	1.19 (0.99,1.42) 0.85 (0.73,1.00)	0.058 0.045
Acne Relative to SEA Tour (Pre/Post SEA vs. Pre-SEA)	11	0.184	≤18.6 >18.6	4.81 (0.74,31.46) 1.30 (0.49,3.40)	0.101 0.598	0.072	≤18.6 >18.6	3.56 (1.21,10.43) 1.15 (0.56,2.37)	0.021 0.701
Location of Acne (Post-SEA)	11	0.021	≤18.6 >18.6	0.71 (0.43,1.17) 1.42 (1.00,2.03)	0.177 0.051	0.083	≤18.6 >18.6	0.76 (0.54,1.07) 1.11 (0.85,1.44)	0.113 0.458
Location of Acne (Pre/Post-SEA and Post-SEA)	11	0.037	≤18.6 >18.6	0.84 (0.57,1.24) 1.42 (1.03,1.94)	0.386 0.030	0.141	≤18.6 >18.6	0.84 (0.63,1.11) 1.10 (0.87,1.38)	0.213 0.433
Comedones	11	0.862	≤18.6 >18.6	1.20 (0.90,1.61) 1.24 (0.98,1.57)	0.221 0.074	0.909	≤18.6 >18.6	1.13 (0.92,1.38) 1.11 (0.93,1.33)	0.256 0.263
Acneiform Lesions	11	0.621	≤18.6 >18.6	0.89 (0.61,1.29) 0.78 (0.55,1.12)	0.530 0.179	0.124	≤18.6 >18.6	1.26 (0.96,1.66) 0.95 (0.74,1.23)	0.091 0.709

TABLE Q-14. (Continued)
**Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time**

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Acneiform Scars	11	0.097	≤18.6 >18.6	1.43 (1.01,2.03) 0.97 (0.69,1.34)	0.047 0.833	0.032	≤18.6 >18.6	1.38 (1.06,1.78) 0.94 (0.74,1.21)	0.016 0.644
Depigmentation	11	0.346	≤18.6 >18.6	1.09 (0.70,1.69) 0.82 (0.54,1.24)	0.695 0.344	0.076	≤18.6 >18.6	1.32 (0.95,1.82) 0.88 (0.65,1.19)	0.094 0.414
Inclusion Cysts	11	0.297	≤18.6 >18.6	0.76 (0.49,1.18) 1.01 (0.73,1.39)	0.223 0.943	0.870	≤18.6 >18.6	0.80 (0.59,1.06) 0.82 (0.64,1.05)	0.124 0.111
Hyperpigmentation	11	0.808	≤18.6 >18.6	1.32 (0.96,1.82) 1.26 (0.96,1.64)	0.084 0.090	0.216	≤18.6 >18.6	1.42 (1.13,1.79) 1.17 (0.96,1.44)	0.003 0.123
Other Abnormalities	11	0.872	≤18.6 >18.6	0.96 (0.74,1.26) 0.94 (0.75,1.17)	0.791 0.574	0.864	≤18.6 >18.6	0.93 (0.77,1.13) 0.91 (0.77,1.09)	0.470 0.304
Dermatology Index	11	0.440	≤18.6 >18.6	1.15 (0.90,1.46) 1.01 (0.83,1.24)	0.265 0.892	0.061	≤18.6 >18.6	1.19 (0.99,1.42) 0.95 (0.81,1.11)	0.059 0.540
Reported/Verified Essential Hypertension	12	0.202	≤18.6 >18.6	1.20 (0.90,1.60) 0.94 (0.74,1.19)	0.220 0.600	0.506	≤18.6 >18.6	1.13 (0.92,1.38) 1.03 (0.86,1.24)	0.260 0.763
Reported/Verified Essential Hypertension ^c	12	0.217	≤18.6 >18.6	1.25 (0.95,1.65) 1.00 (0.79,1.26)	0.108 0.991	0.336	≤18.6 >18.6	1.25 (1.03,1.52) 1.10 (0.93,1.30)	0.023 0.271
Reported Heart Disease (Excluding Essential Hypertension)	12	0.867	≤18.6 >18.6	0.96 (0.72,1.28) 0.93 (0.73,1.18)	0.788 0.560	0.670	≤18.6 >18.6	0.89 (0.73,1.08) 0.84 (0.71,1.01)	0.252 0.060

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Verified Heart Disease (Excluding Essential Hypertension)	12	0.852	≤18.6 >18.6	0.97 (0.72,1.29) 0.93 (0.73,1.19)	0.811 0.567	0.628	≤18.6 >18.6	0.90 (0.74,1.09) 0.84 (0.70,1.00)	0.267 0.056
Reported/Verified Myocardial Infarction	12	0.705	≤18.6 >18.6	1.23 (0.62,2.44) 1.05 (0.64,1.72)	0.554 0.859	0.159	≤18.6 >18.6	1.63 (0.98,2.69) 1.04 (0.70,1.53)	0.058 0.855
Systolic Blood Pressure	12	****	≤18.6 >18.6	**** ****	**** ****	0.670**	≤18.6 >18.6	1.00 (0.78,1.29)** 0.94 (0.76,1.15)**	0.978** 0.527**
Heart Sounds	12	****	≤18.6 >18.6	**** ****	**** ****	****	≤18.6 >18.6	**** ****	**** ****
Overall ECG	12	0.105	≤18.6 >18.6	1.39 (0.95,2.03) 0.94 (0.69,1.28)	0.085 0.688	0.249	≤18.6 >18.6	1.21 (0.93,1.58) 0.99 (0.79,1.25)	0.152 0.936
ECG: RBBB	12	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
ECG: LBBB	12	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
ECG: Nonspecific T-Waves	12	0.428	≤18.6 >18.6	1.12 (0.70,1.81) 0.89 (0.63,1.25)	0.636 0.499	0.823**	≤18.6 >18.6	1.08 (0.77,1.52)** 1.03 (0.80,1.33)**	0.645** 0.799**
ECG: Bradycardia	12	0.361	≤18.6 >18.6	1.08 (0.60,1.95) 0.58 (0.15,2.17)	0.802 0.417	0.051	≤18.6 >18.6	1.05 (0.70,1.56) 0.44 (0.19,1.05)	0.829 0.063
ECG: Arrhythmia	12	0.201	≤18.6 >18.6	2.18 (1.15,4.15) 1.28 (0.75,2.21)	0.017 0.366	0.034**	≤18.6 >18.6	1.79 (1.11,2.90)** 0.90 (0.58,1.40)**	0.018** 0.648**

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
ECG: Other Diagnoses	12	0.120	≤18.6 >18.6	1.15 (0.81,1.63) 0.78 (0.55,1.12)	0.428 0.185	0.026	≤18.6 >18.6	1.13 (0.89,1.44) 0.77 (0.59,1.00)	0.305 0.046
Diastolic Blood Pressure	12	0.978	≤18.6 >18.6	0.79 (0.40,1.56) 0.80 (0.49,1.31)	0.502 0.381	0.556	≤18.6 >18.6	0.95 (0.62,1.48) 1.12 (0.80,1.57)	0.832 0.495
Funduscopic Examination	12	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Carotid Bruits	12	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Radial Pulses	12	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Femoral Pulses	12	0.407	≤18.6 >18.6	1.33 (0.41,4.30) 0.71 (0.30,1.67)	0.634 0.429	****	≤18.6 >18.6	**** ****	**** ****
Popliteal Pulses	12	0.723**	≤18.6 >18.6	0.52 (0.15,1.86)** 0.68 (0.33,1.42)**	0.317** 0.303**	0.880**	≤18.6 >18.6	0.94 (0.46,1.95)** 0.88 (0.53,1.47)**	0.874** 0.630**
Dorsalis Pedis Pulses	12	0.129	≤18.6 >18.6	1.50 (1.00,2.24) 1.01 (0.73,1.41)	0.051 0.941	0.355	≤18.6 >18.6	1.34 (1.00,1.78) 1.12 (0.88,1.44)	0.048 0.355
Posterior Tibial Pulses	12	0.762	≤18.6 >18.6	1.05 (0.35,3.15) 0.86 (0.47,1.59)	0.937 0.629	0.297	≤18.6 >18.6	1.88 (0.91,3.88) 1.20 (0.77,1.86)	0.087 0.413
Posterior Tibial Pulses ^c	12	0.866	≤18.6 >18.6	0.98 (0.35,2.72) 0.89 (0.48,1.63)	0.971 0.698	0.414	≤18.6 >18.6	1.65 (0.84,3.26) 1.18 (0.76,1.85)	0.146 0.465
Leg Pulses	12	0.220**	≤18.6 >18.6	1.31 (0.89,1.91)** 0.97 (0.72,1.32)**	0.167** 0.866**	0.460	≤18.6 >18.6	1.30 (0.99,1.71) 1.14 (0.91,1.43)	0.057 0.239

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Peripheral/All Pulses	12	0.172**	≤18.6 >18.6	1.33 (0.91,1.95)** 0.96 (0.71,1.29)**	0.136** 0.790**	0.436	≤18.6 >18.6	1.30 (0.99,1.70) 1.13 (0.90,1.42)	0.062 0.285
Red Blood Cell Count	13	0.066	≤18.6 >18.6	0.29 (0.04,2.22) 1.32 (0.84,2.06)	0.232 0.229	0.011	≤18.6 >18.6	0.50 (0.19,1.32) 1.58 (1.08,2.31)	0.159 0.018
Hematocrit	13	0.358	≤18.6 >18.6	0.14 (0.00,13.94) 0.72 (0.36,1.42)	0.402 0.343	0.300	≤18.6 >18.6	0.47 (0.08,2.76) 1.09 (0.69,1.72)	0.403 0.720
Mean Corpuscular Volume	13	0.978	≤18.6 >18.6	1.06 (0.71,1.58) 1.06 (0.78,1.42)	0.772 0.724	0.972	≤18.6 >18.6	1.20 (0.91,1.59) 1.19 (0.95,1.50)	0.195 0.127
Mean Corpuscular Hemoglobin	13	0.139	≤18.6 >18.6	1.43 (0.92,2.23) 0.94 (0.67,1.32)	0.109 0.725	0.382	≤18.6 >18.6	1.29 (0.93,1.79) 1.08 (0.83,1.40)	0.124 0.585
Platelet Count	13	0.551	≤18.6 >18.6	0.90 (0.38,2.17) 1.22 (0.75,1.97)	0.820 0.428	0.930	≤18.6 >18.6	1.19 (0.65,2.19) 1.23 (0.84,1.80)	0.573 0.291
Prothrombin Time	13	0.089	≤18.6 >18.6	2.79 (1.13,6.88) 1.14 (0.65,2.01)	0.026 0.625	****	≤18.6 >18.6	**** ****	**** ****
Kidney Disease	14	****	≤18.6 >18.6	**** ****	**** ****	0.910	≤18.6 >18.6	1.01 (0.77,1.32) 1.03 (0.81,1.31)	0.961 0.823
Urinary Protein	14	0.204	≤18.6 >18.6	0.80 (0.47,1.35) 1.25 (0.79,1.98)	0.400 0.344	0.657	≤18.6 >18.6	1.05 (0.72,1.52) 0.93 (0.65,1.32)	0.818 0.674
Urinary Occult Blood	14	0.421	≤18.6 >18.6	1.32 (0.83,2.10) 1.05 (0.76,1.44)	0.238 0.765	0.525	≤18.6 >18.6	1.09 (0.78,1.52) 1.24 (0.98,1.58)	0.620 0.076
Urinary White Blood Cell Count	14	0.383**	≤18.6 >18.6	0.93 (0.61,1.41)** 1.18 (0.84,1.67)**	0.732** 0.348**	0.346	≤18.6 >18.6	1.02 (0.76,1.38) 1.25 (0.94,1.65)	0.877 0.123

TABLE Q-14. (Continued)
**Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time**

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Current Thyroid Function	15	0.437	≤18.6 >18.6	0.76 (0.37,1.54) 1.07 (0.62,1.85)	0.447 0.813	0.960	≤18.6 >18.6	0.91 (0.58,1.42) 0.89 (0.59,1.34)	0.669 0.588
History of Thyroid Disease	15	0.341	≤18.6 >18.6	0.77 (0.34,1.73) 1.18 (0.76,1.83)	0.527 0.471	0.883	≤18.6 >18.6	0.97 (0.58,1.64) 0.93 (0.67,1.30)	0.920 0.666
Thyroid Gland	15	0.890	≤18.6 >18.6	0.95 (0.72,1.25) 0.97 (0.78,1.21)	0.697 0.784	0.754	≤18.6 >18.6	1.03 (0.85,1.25) 1.07 (0.90,1.26)	0.783 0.432
Testes	15	0.121	≤18.6 >18.6	2.59 (1.30,5.12) 1.36 (0.83,2.23)	0.006 0.223	0.311	≤18.6 >18.6	2.03 (1.21,3.39) 1.46 (0.99,2.17)	0.007 0.058
T ₃ % Uptake	15	0.718	≤18.6 >18.6	0.92 (0.48,1.74) 0.76 (0.35,1.66)	0.788 0.492	0.477	≤18.6 >18.6	0.91 (0.60,1.39) 0.72 (0.43,1.20)	0.669 0.205
TSH	15	0.520	≤18.6 >18.6	1.48 (0.65,3.36) 1.06 (0.60,1.88)	0.354 0.845	0.423**	≤18.6 >18.6	1.23 (0.67,2.24)** 0.90 (0.58,1.41)**	0.507** 0.643**
Testosterone	15	0.796	≤18.6 >18.6	0.53 (0.17,1.69) 0.63 (0.33,1.19)	0.285 0.154	0.762	≤18.6 >18.6	1.00 (0.44,2.25) 0.86 (0.54,1.37)	0.992 0.536
Fasting Glucose	15	0.396	≤18.6 >18.6	1.33 (0.93,1.89) 1.59 (1.23,2.05)	0.118 <0.001	0.666**	≤18.6 >18.6	1.44 (1.10,1.88)** 1.55 (1.26,1.91)**	0.007** <0.001**
Composite Diabetes Indicator	15	0.723	≤18.6 >18.6	1.46 (0.99,2.13) 1.58 (1.18,2.11)	0.054 0.002	0.512	≤18.6 >18.6	1.62 (1.20,2.19) 1.43 (1.14,1.81)	0.002 0.002
Composite Skin Test Diagnosis	16	0.341**	≤18.6 >18.6	0.64 (0.35,1.16)** 0.92 (0.55,1.54)**	0.143** 0.762**	0.418	≤18.6 >18.6	0.77 (0.52,1.15) 0.96 (0.68,1.35)	0.202 0.814
Asthma	17	0.324	≤18.6 >18.6	1.05 (0.57,1.95) 0.65 (0.28,1.48)	0.866 0.303	0.141	≤18.6 >18.6	1.05 (0.69,1.59) 0.64 (0.36,1.12)	0.811 0.116

TABLE Q-14. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time

Clinical Parameter	Reference Chapter	Minimal Assumption				Maximal Assumption			
		C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value	C*T ^a	Time (Yrs.)	Adj. Relative Risk (95% C.I.)	p-Value
Bronchitis	17	0.257**	≤18.6 >18.6	0.69 (0.45,1.07)** 0.93 (0.70,1.24)**	0.099** 0.627**	****	≤18.6 >18.6	**** ****	**** ****
Pleurisy	17	****	≤18.6 >18.6	**** ****	**** ****	****	≤18.6 >18.6	**** ****	**** ****
Pneumonia	17	0.947	≤18.6 >18.6	1.00 (0.66,1.53) 0.98 (0.65,1.48)	0.993 0.932	0.773	≤18.6 >18.6	0.91 (0.68,1.24) 0.97 (0.71,1.34)	0.565 0.872
Tuberculosis	17	0.601	≤18.6 >18.6	0.68 (0.28,1.65) 0.91 (0.48,1.72)	0.396 0.769	0.821	≤18.6 >18.6	0.81 (0.46,1.44) 0.89 (0.53,1.47)	0.477 0.640
Thorax and Lung Abnormalities	17	0.396**	≤18.6 >18.6	1.51 (0.92,2.47)** 1.18 (0.85,1.64)**	0.100** 0.335**	0.794	≤18.6 >18.6	1.27 (0.87,1.84) 1.34 (1.03,1.76)	0.216 0.030
Hyperresonance	17	0.902	≤18.6 >18.6	1.46 (0.79,2.70) 1.39 (0.86,2.25)	0.231 0.179	0.574	≤18.6 >18.6	1.29 (0.82,2.05) 1.53 (1.05,2.23)	0.270 0.027
Dullness	17	--	≤18.6 >18.6	-- --	-- --	--	≤18.6 >18.6	-- --	-- --
Wheezes	17	0.409**	≤18.6 >18.6	1.95 (0.93,4.12)** 1.36 (0.87,2.14)**	0.079** 0.179**	0.907	≤18.6 >18.6	1.46 (0.81,2.63) 1.41 (0.97,2.04)	0.203 0.074
Rales	17	0.607	≤18.6 >18.6	1.87 (0.66,5.26) 1.36 (0.68,2.69)	0.236 0.383	0.545	≤18.6 >18.6	1.19 (0.53,2.67) 1.59 (0.90,2.81)	0.680 0.107
X-Ray Interpretation	17	0.536	≤18.6 >18.6	1.19 (0.68,2.09) 0.95 (0.59,1.51)	0.539 0.816	0.455	≤18.6 >18.6	1.20 (0.80,1.79) 0.97 (0.68,1.39)	0.390 0.879

TABLE Q-14. (Continued)

**Summary of Adjusted Results for Dichotomous Variables
Model 2: Ranch Hands - Log₂ (Current Dioxin) and Time**

^ap-value for test of significance for homogeneity of relative risks (current dioxin continuous, time categorized); C*T=current dioxin-by-time interaction.

^bAnalysis performed for model including occupation.

^cAnalysis performed for model excluding percent body fat.

--: Adjusted relative risk/confidence interval/p-value not given due to the sparse number of abnormalities.

**Log₂ (current dioxin)-by-time-by-covariate interaction ($0.01 < p \leq 0.05$); adjusted relative risk, confidence interval, and p-value derived from a model fitted after deletion of this interaction.

****Log₂ (current dioxin)-by-time-by-covariate interaction ($p \leq 0.01$); adjusted relative risk, confidence interval, and p-value not presented.

Note: Estimated relative risk for a twofold increase in dioxin.

TABLE Q-15.
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Self-Perception of Health	6	0.73 (0.37,1.42) 0.350	1.46 (0.77,2.75) 0.244	1.40 (0.72,2.71) 0.323	0.270
Appearance of Illness or Distress by Physician	6	1.12 (0.20,6.18)** 0.894**	-- --	3.12 (0.54,18.12)** 0.204**	0.300**
Relative Age	6	1.05 (0.59,1.07) 0.856	0.71 (0.31,1.61) 0.412	1.31 (0.67,2.56) 0.424	0.638
Percent Body Fat	6	0.44 (0.30,0.63) <0.001	0.99 (0.68,1.43) 0.954	1.38 (0.97,1.96) 0.075	<0.001
Sedimentation Rate	6	1.03 (0.51,2.07) 0.937	2.32 (1.18,4.56) 0.015	3.86 (2.00,7.45) <0.001	<0.001
All Skin Neoplasms (Verified)	7	1.32 (0.92,1.91) 0.134	1.39 (0.89,2.19) 0.150	0.93 (0.55,1.57) 0.778	0.262
All Skin Neoplasms (Verified and Suspected)	7	1.30 (0.90,1.87) 0.162	1.36 (0.87,2.14) 0.184	0.90 (0.53,1.52) 0.694	0.296
Malignant Skin Neoplasms (Verified)	7	1.33 (0.83,2.14) 0.238	1.47 (0.81,2.65) 0.201	0.84 (0.40,1.78) 0.657	0.381

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TABLE Q-15. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Malignant Skin Neoplasms (Verified and Suspected)	7	1.33 (0.81,2.09) 0.276	1.44 (0.80,2.60) 0.222	0.83 (0.39,1.75) 0.618	0.374
Benign Skin Neoplasms (Non-Blacks Only)	7	1.26 (0.75,2.11) 0.384	1.21 (0.64,2.31) 0.555	1.21 (0.63,2.30) 0.565	0.808
Benign Skin Neoplasms (Blacks Included)	7	1.35 (0.82,2.22) 0.246	1.25 (0.67,2.33) 0.478	1.17 (0.62,2.22) 0.621	0.680
Skin Neoplasms of Uncertain Behavior or Unspecified Nature (Verified)	7	-- --	-- --	-- --	--
Skin Neoplasms of Uncertain Behavior or Unspecified Nature (Verified and Suspected)	7	-- --	-- --	-- --	--
<u>Basal Cell Carcinoma</u>	7	1.37 (0.84,2.26) 0.208	1.54 (0.84,2.82) 0.124	0.71 (0.31,1.63) 0.478	0.205
Ear, Face, Head, and Neck	7	1.19 (0.68,2.10) 0.541	1.18 (0.57,2.45) 0.662	0.26 (0.06,1.08) 0.063	0.087

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Trunk	7	1.59 (0.60,4.25) 0.351	1.28 (0.35,4.75) 0.709	2.06 (0.62,6.83) 0.238	0.641
Upper Extremities	7	1.78 (0.39,8.07) 0.455	1.10 (0.12,9.98) 0.934	-- --	0.567
Lower Extremities	7	-- --	-- --	-- --	--
Other Sites	7	-- --	13.34 (1.40,127.1) 0.024	3.93 (0.25,62.34) 0.332	0.035
<u>Sun Exposure-Related Malignant Skin Neoplasms</u>	7	1.45 (0.89,2.34) 0.134	1.51 (0.84,2.74) 0.171	0.77 (0.35,1.69) 0.515	0.188
Ear, Face, Head, and Neck	7	1.34 (0.78,2.31) 0.285	1.28 (0.63,2.59) 0.498	0.38 (0.12,1.28) 0.119	0.128
Trunk	7	1.21 (0.48,3.08) 0.689	0.97 (0.27,3.46) 0.961	1.53 (0.48,4.87) 0.468	0.896
Upper Extremities	7	2.21 (0.54,9.01) 0.267	1.05 (0.12,9.49) 0.969	1.24 (0.14,11.38) 0.847	0.735
Lower Extremities	7	-- --	-- --	-- --	--

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Other Sites	7	-- --	13.34 (1.40,127.1) 0.024	3.93 (0.25,62.34) 0.332	0.035
<u>Melanoma</u>	7	0.64 (0.07,6.24) 0.702	-- --	-- --	--
Ear, Face, Head, and Neck	7	-- --	-- --	-- --	--
Trunk	7	-- --	-- --	-- --	--
Upper Extremities	7	-- --	-- --	-- --	--
Lower Extremities	7	-- --	-- --	-- --	--
Other Sites	7	-- --	-- --	-- --	--
Squamous Cell Carcinoma	7	4.35 (0.40,47.57) 0.228	4.39 (0.28,69.66) 0.294	4.06 (0.26,64.37) 0.320	0.546

TABLE Q-15. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
<u>Basal Cell Carcinoma by Occupation</u>					
Officer-Ear, Face, Head, and Neck vs. None	7	1.13 (0.52,2.44) 0.757	0.75 (0.15,3.66) 0.719	--	0.865
Officer-Other Sites vs. None	7	2.89 (0.85,9.81) 0.087	1.91 (0.21,17.70) 0.569	--	0.356
Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7	1.72 (0.39,7.65) 0.472	0.37 (0.04,3.19) 0.358	0.45 (0.05,4.09) 0.472	0.481
Enlisted Flyer-Other Sites vs. None	7	-- --	2.56 (0.15,42.6) 0.511	15.44 (1.59,147.1) 0.017	0.028
Enlisted Groundcrew-Ear, Face, Head, and Neck vs. None	7	1.23 (0.38,4.04) 0.734	2.22 (0.84,5.91) 0.110	0.20 (0.03,1.55) 0.121	0.048
Enlisted Groundcrew-Other Sites vs. None	7	-- --	2.47 (0.67,9.08) 0.171	0.37 (0.04,3.09) 0.354	0.081

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value		
		Unknown vs. Background	Low vs. Background	High vs. Background			
<u>Sun Exposure-Related Malignant Skin Neoplasm by Occupation</u>							
<u>Malignant Skin Neoplasm by Occupation</u>							
Officer-Ear, Face, Head, and Neck vs. None	7	1.32 (0.64,2.74) 0.449	0.71 (0.15,3.45) 0.671	-- --	0.686		
Officer-Other Sites vs. None	7	2.34 (0.75,7.31) 0.144	1.51 (0.17,13.40) 0.709	-- --	0.508		
Enlisted Flyer-Ear, Face, Head, and Neck vs. None	7	1.81 (0.41,8.10) 0.434	0.75 (0.14,3.97) 0.735	0.45 (0.05,4.12) 0.476	0.668		
Enlisted Flyer-Other Sites vs. None	7	-- --	1.20 (0.10,13.75) 0.882	7.29 (1.23,42.71) 0.028	0.055		
Enlisted Groundcrew-Ear, Face, Head, and Neck vs. None	7	1.17 (0.36,3.85) 0.792	2.17 (0.82,5.78) 0.119	0.39 (0.09,1.80) 0.230	0.149		
Enlisted Groundcrew-Other Sites vs. None	7	-- --	2.47 (0.67,9.08) 0.171	0.37 (0.04,3.12) 0.360	0.082		

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TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Basal Cell Carcinoma (One vs. None)	7	1.13 (0.64,1.98) 0.672	1.18 (0.59,2.36) 0.646	0.60 (0.25,1.44) 0.250	0.515
Basal Cell Carcinoma (Multiple vs. None)	7	2.95 (1.05,8.29) 0.039	3.59 (1.07,12.04) 0.038	0.89 (0.11,7.56) 0.915	0.078
All Systemic Neoplasms (Verified)	7	0.59 (0.35,1.02) 0.057	1.21 (0.70,2.08) 0.488	1.65 (0.96,2.83) 0.072	0.021
All Systemic Neoplasms (Verified and Suspected)	7	0.58 (0.34,1.00) 0.050	1.19 (0.69,2.04) 0.528	1.61 (0.94,2.77) 0.085	0.022
Malignant Systemic Neoplasms	7	0.68 (0.22,2.11) 0.502	3.51 (1.50,8.25) 0.004	-- --	0.002
Benign Systemic Neoplasms	7	0.65 (0.35,1.20) 0.165	0.76 (0.37,1.59) 0.472	2.13 (1.20,3.79) 0.010	0.011
Systemic Neoplasms of Uncertain Behavior or Un-specified Nature (Verified)	7	-- 0.224	-- 0.524	0.70 (0.08,5.84) 0.999	0.253

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TABLE Q-15. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Systemic Neoplasms of Uncertain Behavior or Unspecified Nature (Verified and Suspected)	7	-- 0.155	-- 0.418	0.60 (0.07,4.87) 0.999	0.184
<u>Systemic Neoplasms:</u>					
<u>Location/Site</u>					
Ear, Face, Head, and Neck	7	-- --	-- --	-- --	--
Oral Cavity, Pharynx, and Larynx	7	-- --	-- --	-- --	--
Brain	7	-- --	-- --	-- --	--
Thymus and Mediastinum	7	-- --	-- --	-- --	--
Thyroid Gland	7	-- --	-- --	-- --	--
Bronchus and Lung	7	-- --	-- --	-- --	--
Colon and Rectum	7	-- --	-- --	-- --	--

TABLE Q-15. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Kidney and Bladder	7	1.13 (0.10,12.55) 0.923	8.60 (1.55,47.71) 0.014	-- --	0.041
Prostate	7	-- --	2.28 (0.40,12.96) 0.353	-- --	--
Testicles	7	-- --	-- --	-- --	--
III-Defined Sites	7	-- --	-- --	-- --	--
Carcinoma in Situ of Penis	7	-- --	-- --	-- --	--
Carcinoma in Situ of Other and Unspecified Sites	7	-- --	-- --	-- --	--
Hodgkin's Disease	7	-- --	-- --	-- --	--
Leukemia	7	-- --	-- --	-- --	--
Other Malignant Neoplasms of Lymphoid and Histiocytic Tissue	7	2.30 (0.14,37.13) 0.558	4.27 (0.26,69.08) 0.307	-- --	0.687

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Malignant Systemic Neoplasms Conditioned on Systemic Neoplasms (Verified and Suspected)	7	1.17 (0.33,4.13) 0.999	4.53 (1.53,13.42) 0.013	-- 0.047	0.001
All Skin and Systemic Neoplasms (Verified)	7	1.05 (0.77,1.44) 0.757	1.24 (0.84,1.81) 0.276	1.25 (0.84,1.87) 0.267	0.576
All Skin and Systemic Neoplasms (Verified and Suspected)	7	1.03 (0.75,1.42) 0.833	1.22 (0.83,1.78) 0.313	1.23 (0.83,1.84) 0.303	0.629
Inflammatory Diseases	8	-- --	-- --	-- --	--
Hereditary and Degenerative Diseases	8	1.41 (0.78,2.53) 0.254	0.90 (0.39,2.09) 0.813	0.88 (0.36,2.16) 0.777	0.612
Peripheral Disorders	8	0.79 (0.54,1.16) 0.226	0.85 (0.53,1.36) 0.506	1.33 (0.85,2.08) 0.215	0.236
Disorders of the Eye	8	1.05 (0.74,1.48) 0.798	1.09 (0.71,1.66) 0.699	1.24 (0.81,1.91) 0.321	0.801
Tympanic Membrane Disorder	8	0.83 (0.42,1.64) 0.600	1.70 (0.87,3.31) 0.116	1.33 (0.62,2.87) 0.470	0.315

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TABLE Q-15. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Otitis	8	1.13 (0.78,1.64) 0.532	1.04 (0.65,1.67) 0.863	0.76 (0.43,1.34) 0.343	0.633
Hearing Loss	8	0.82 (0.60,1.12) 0.211	0.95 (0.64,1.40) 0.787	0.91 (0.63,1.31) 0.600	0.660
Other Neurological Disorders	8	0.71 (0.50,0.99) 0.041	1.39 (0.96,2.01) 0.078	1.72 (1.17,2.51) 0.005	<0.001
Other Neurological Disorders ^a	8	1.12 (0.78,1.62) 0.545	1.09 (0.74,1.62) 0.660	1.06 (0.72,1.58) 0.760	0.924
Smell	8	0.37 (0.04,3.09) 0.359	2.05 (0.51,8.28) 0.317	-- --	0.193
Visual Fields	8	-- --	-- --	-- --	--
Light Reaction	8	0.84 (0.22,3.18) 0.794	-- --	1.20 (0.25,5.87) 0.819	0.287
Ocular Movement	8	0.59 (0.07,5.31) 0.636	3.01 (0.67,13.56) 0.150	-- --	0.170
Facial Sensation	8	-- --	0.80 (0.09,6.87) 0.836	0.80 (0.09,7.10) 0.842	0.313
Smile	8	0.49 (0.11,2.30) 0.369	0.45 (0.06,3.55) 0.445	1.11 (0.23,5.30) 0.898	0.671

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Palpebral Fissure	8	0.90 (0.28,2.88) 0.853	1.63 (0.50,5.25) 0.416	1.45 (0.39,5.42) 0.584	0.803
Balance	8	-- --	-- --	-- --	--
Speech	8	-- --	-- --	-- --	--
Neck Range of Motion	8	0.97 (0.63,1.47)** 0.867**	1.11 (0.66,1.86)** 0.703**	1.28 (0.71,2.32)** 0.413**	0.830**
Cranial Nerve Index	8	0.84 (0.58,1.22) 0.356	1.14 (0.73,1.77) 0.558	0.98 (0.58,1.64) 0.931	0.665
Cranial Nerve Index Without Range of Motion	8	0.53 (0.26,1.09)** 0.084**	1.09 (0.54,2.19)** 0.807**	0.84 (0.36,1.93)** 0.674**	0.277**
Pin Prick	8	0.97 (0.54,1.71) 0.902	0.84 (0.40,1.77) 0.643	1.22 (0.61,2.42) 0.571	0.878
Light Touch	8	1.09 (0.57,2.09) 0.797	0.97 (0.42,2.27) 0.943	0.93 (0.39,2.22) 0.876	0.989
Muscle Status	8	0.77 (0.30,1.99)** 0.586**	0.92 (0.30,2.81)** 0.884**	1.08 (0.34,3.45)** 0.893**	0.945**
Vibration	8	0.63 (0.17,2.29) 0.478	1.21 (0.33,4.46) 0.774	1.99 (0.52,7.57) 0.312	0.584

TABLE Q-15. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Patellar Reflex	8	1.05 (0.32,3.45) 0.935	1.80 (0.55,5.94) 0.332	2.75 (0.89,8.50) 0.078	0.343
Achilles Reflex	8	0.66 (0.35,1.26)** 0.211**	1.39 (0.74,2.60)** 0.303**	1.06 (0.51,2.23)** 0.871**	0.313**
Biceps Reflex	8	-- --	-- --	-- --	--
Babinski Reflex	8	-- --	-- --	-- --	--
Tremor	8	0.90 (0.40,1.99) 0.789	0.71 (0.24,2.10) 0.532	1.51 (0.62,3.70) 0.364	0.657
Coordination	8	4.68 (0.84,25.97)** 0.077**	3.89 (0.53,28.40)** 0.180**	18.30 (3.26,102.7)** 0.001**	0.006**
Romberg Sign	8	-- --	-- --	-- --	--
Gait	8	1.06 (0.45,2.50)** 0.889**	1.50 (0.58,3.88)** 0.399**	2.03 (0.81,5.08)** 0.131**	0.482**
CNS Index	8	1.01 (0.56,1.81)** 0.973**	0.91 (0.43,1.92)** 0.798**	2.08 (1.11,3.89)** 0.023**	0.137**
Psychoses	9	0.50 (0.17,1.47) 0.207	0.73 (0.25,2.18) 0.578	0.46 (0.13,1.60) 0.223	0.385

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Alcohol Dependence	9	1.32 (0.79,2.19) 0.286	0.81 (0.40,1.64) 0.557	1.37 (0.74,2.54) 0.323	0.444
Drug Dependence	9	-- --	-- --	-- --	--
Anxiety	9	0.90 (0.61,1.31) 0.567	1.15 (0.75,1.76) 0.518	1.08 (0.70,1.68) 0.727	0.778
Other Neuroses	9	1.06 (0.81,1.40) 0.661	1.65 (1.19,2.30) 0.003	1.22 (0.87,1.72) 0.251	0.024
Trouble Falling Asleep	9	0.82 (0.53,1.26) 0.360	0.56 (0.31,1.02) 0.057	0.58 (0.33,1.03) 0.062	0.084
Waking Up During the Night	9	0.84 (0.57,1.24)** 0.370**	0.87 (0.53,1.41)** 0.562**	0.98 (0.60,1.60)** 0.928**	0.803**
Waking Up Too Early and Can't Go Back to Sleep	9	0.87 (0.58,1.33) 0.528	0.94 (0.57,1.56) 0.823	0.80 (0.47,1.38) 0.422	0.830
Waking Up Unrefreshed	9	0.63 (0.37,1.06) 0.083	0.94 (0.54,1.65) 0.833	1.19 (0.71,1.99) 0.519	0.230
Involuntarily Falling Asleep During the Day	9	1.08 (0.53,2.20) 0.837	0.77 (0.29,2.06) 0.604	1.43 (0.64,3.17) 0.382	0.736

TABLE Q-15. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Great or Disabling Fatigue During the Day	9	0.90 (0.35,2.29) 0.819	1.85 (0.82,4.21) 0.141	0.95 (0.36,2.47) 0.909	0.475
Frightening Dreams	9	0.80 (0.35,1.80) 0.584	0.85 (0.32,2.26) 0.745	2.54 (1.28,5.02) 0.007	0.035
Talking in Sleep	9	1.03 (0.49,2.15) 0.938	0.67 (0.25,1.78) 0.425	1.45 (0.72,2.92) 0.303	0.532
Sleepwalking	9	1.34 (0.51,3.50) 0.548	0.34 (0.04,2.67) 0.308	1.54 (0.52,4.52) 0.436	0.416
Abnormal Movement/Activity During the Night	9	0.60 (0.24,1.50) 0.276	1.73 (0.83,3.60) 0.143	0.80 (0.32,2.01) 0.635	0.200
Sleep Problems Requiring Medication	9	1.57 (0.60,4.07) 0.355	1.62 (0.56,4.69) 0.376	0.29 (0.04,2.26) 0.237	0.230
Snore Loudly in All Sleeping Positions	9	0.54 (0.29,1.00) 0.050	1.34 (0.76,2.39) 0.316	1.34 (0.74,2.44) 0.330	0.049
Insomnia	9	0.92 (0.67,1.25) 0.581	0.99 (0.68,1.44) 0.944	0.85 (0.57,1.28) 0.435	0.847
Overall Sleep Disorder Index	9	0.89 (0.67,1.17) 0.394	0.99 (0.71,1.39) 0.958	1.09 (0.77,1.55) 0.620	0.751

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TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
SCL-90-R					
Anxiety	9	0.90 (0.46,1.73) 0.746	1.43 (0.73,2.77) 0.295	1.64 (0.88,3.05) 0.119	0.320
Depression	9	0.92 (0.53,1.61) 0.780	1.10 (0.58,2.10) 0.765	1.70 (0.97,2.98) 0.064	0.286
Hostility	9	0.95 (0.46,1.94) 0.881	1.37 (0.65,2.89) 0.411	0.97 (0.44,2.15) 0.948	0.849
Q-168 Interpersonal Sensitivity	9	0.70 (0.35,1.40) 0.311	0.83 (0.39,1.77) 0.635	1.11 (0.57,2.16) 0.768	0.681
Obsessive-Compulsive Behavior	9	0.71 (0.37,1.34) 0.291	1.32 (0.71,2.45) 0.378	1.45 (0.80,2.63) 0.221	0.240
Paranoid Ideation	9	0.96 (0.44,2.12) 0.922	1.60 (0.72,3.56) 0.246	0.67 (0.25,1.85) 0.444	0.490
Phobic Anxiety	9	0.45 (0.22,0.94) 0.033	1.19 (0.63,2.22) 0.595	0.90 (0.46,1.77) 0.764	0.092
Psychoticism	9	0.78 (0.45,1.37) 0.391	0.99 (0.53,1.83) 0.962	1.19 (0.67,2.10) 0.555	0.704
Somatization	9	1.05 (0.62,1.77)** 0.857**	1.16 (0.64,2.09)** 0.626**	1.49 (0.84,2.64)** 0.168**	0.597**
Global Severity Index	9	0.92 (0.50,1.71) 0.803	1.22 (0.64,2.35) 0.546	1.66 (0.93,2.97) 0.084	0.333

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Positive Symptom Total	9	0.92 (0.50,1.70) 0.785	1.19 (0.61,2.34) 0.608	1.60 (0.88,2.92) 0.123	0.429
Positive Symptom Distress Index	9	0.66 (0.38,1.15) 0.139	1.50 (0.88,2.54) 0.135	1.29 (0.74,2.26) 0.367	0.076
Viral Hepatitis	10	0.77 (0.58,1.01) 0.061	0.99 (0.71,1.38) 0.935	1.42 (1.01,2.00) 0.047	0.022
Chronic Liver Disease and Cirrhosis (Alcohol-Related)	10	1.51 (0.77,2.96) 0.229	0.96 (0.36,2.58) 0.935	1.72 (0.75,3.95) 0.202	0.449
Chronic Liver Disease and Cirrhosis (Nonalcohol-Related)	10	1.00 (0.26,3.91) 0.997	1.72 (0.44,6.72) 0.434	-- --	0.226
Other Disorders of the Liver	10	0.84 (0.49,1.44) 0.527	1.44 (0.82,2.53) 0.203	1.78 (1.03,3.07) 0.038	0.084
Viral Hepatitis ^a	10	1.01 (0.75,1.35) 0.963	0.82 (0.58,1.16) 0.251	1.03 (0.72,1.47) 0.859	0.667
Jaundice (Unspecified)	10	1.46 (0.67,3.15) 0.339	-- --	0.57 (0.13,2.50) 0.453	0.014
Hepatomegaly	10	0.39 (0.11,1.33) 0.131	1.47 (0.57,3.79) 0.430	1.69 (0.60,4.75) 0.323	0.136

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Ulcer	10	1.03 (0.62,1.69) 0.922	0.62 (0.30,1.28) 0.195	1.24 (0.69,2.25) 0.468	0.408
Skin Bruises, Patches, or Sensitivity	10	1.56 (1.15,2.12) 0.005	1.71 (1.19,2.46) 0.004	2.20 (1.52,3.18) <0.001	<0.001
Current Hepatomegaly	10	-- --	1.11 (0.31,4.04) 0.869	2.42 (0.81,7.29) 0.115	0.006
AST	10	1.05 (0.51,2.15) 0.893	0.93 (0.38,2.30) 0.877	1.22 (0.55,2.72) 0.623	0.959
ALT	10	0.89 (0.58,1.37) 0.592	1.32 (0.82,2.12) 0.256	1.29 (0.81,2.07) 0.282	0.391
GGT	10	0.95 (0.54,1.65)** 0.844**	1.82 (1.03,3.22)** 0.039**	2.00 (1.13,3.56)** 0.018**	0.033**
Alkaline Phosphatase	10	0.88 (0.46,1.69) 0.694	0.91 (0.43,1.94) 0.809	1.11 (0.53,2.32) 0.777	0.950
D-Glucaric Acid	10	-- --	-- --	-- --	--
Total Bilirubin	10	0.77 (0.37,1.61) 0.486	1.05 (0.47,2.36) 0.900	0.11 (0.01,0.81) 0.030	0.018
Direct Bilirubin	10	0.61 (0.28,1.35) 0.224	1.06 (0.47,2.36) 0.891	0.61 (0.23,1.61) 0.317	0.461

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
LDH	10	-- --	-- --	-- --	--
Cholesterol	10	1.56 (1.08,2.24) 0.018	1.16 (0.72,1.88) 0.545	1.13 (0.69,1.84) 0.629	0.141
HDL	10	1.01 (0.50,2.02)** 0.978**	1.12 (0.50,2.51)** 0.778**	1.42 (0.67,3.00)** 0.356**	0.834**
Cholesterol-HDL Ratio	10	0.80 (0.61,1.04) 0.091	1.23 (0.89,1.70) 0.202	1.33 (0.96,1.85) 0.087	0.023
Triglycerides	10	0.56 (0.29,1.11)** 0.097**	1.81 (1.01,3.22)** 0.045**	2.55 (1.46,4.45)** 0.001**	<0.001**
Creatine Kinase	10	0.76 (0.43,1.35)** 0.345**	0.56 (0.26,1.20)** 0.134**	0.48 (0.21,1.10)** 0.083**	0.154**
Occurrence of Acne (Lifetime)	11	1.07 (0.83,1.39) 0.596	1.16 (0.84,1.59) 0.357	0.91 (0.65,1.25) 0.552	0.638
Acne Relative to SEA Tour (Pre/Post-SEA and Post-SEA vs. Pre-SEA and None)	11	1.05 (0.81,1.35)** 0.725**	1.18 (0.86,1.63)** 0.295**	0.97 (0.70,1.34)** 0.858**	0.732**
Acne Relative to SEA Tour (Post-SEA vs. None)	11	1.09 (0.83,1.42) 0.554	1.19 (0.85,1.66) 0.300	0.94 (0.66,1.33) 0.727	0.660

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TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	<u>Adj. Relative Risk (95% C.I.)/p-Value</u>			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Q-172	Acne Relative to SEA Tour (Pre/Post-SEA vs. Pre-SEA)	11 0.76 (0.29,1.99) 0.582	1.32 (0.34,5.06) 0.690	4.13 (0.51,33.66) 0.185	0.336
	Location of Acne (Post-SEA)	11 1.93 (1.19,3.14) 0.008	1.36 (0.74,2.51) 0.327	1.04 (0.52,2.06) 0.921	0.060
	Location of Acne (Pre/Post-SEA and Post-SEA)	11 1.55 (1.02,2.36) 0.039	1.09 (0.64,1.84) 0.757	0.94 (0.54,1.65) 0.840	0.193
	Comedones	11 0.92 (0.67,1.25) 0.575	1.05 (0.72,1.52) 0.807	0.92 (0.61,1.38) 0.685	0.898
	Acneiform Lesions	11 0.63 (0.39,1.01) 0.055	1.03 (0.63,1.70) 0.893	0.68 (0.39,1.18) 0.170	0.137
	Acneiform Scars	11 1.27 (0.82,1.95) 0.284	1.58 (0.96,2.60) 0.070	1.53 (0.92,2.52) 0.098	0.182
	Depigmentation	11 0.86 (0.48,1.53) 0.610	0.98 (0.50,1.94) 0.965	1.50 (0.80,2.83) 0.209	0.536
	Inclusion Cysts	11 1.19 (0.80,1.77) 0.384	1.51 (0.95,2.38) 0.080	0.63 (0.33,1.18) 0.148	0.070
	Hyperpigmentation	11 0.68 (0.46,1.00) 0.052	0.87 (0.56,1.36) 0.541	1.35 (0.89,2.03) 0.157	0.049
	Other Abnormalities	11 1.17 (0.86,1.60) 0.324	0.88 (0.61,1.26) 0.477	1.02 (0.71,1.47) 0.922	0.583

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Dermatology Index	11	1.02 (0.78,1.33) 0.900	1.29 (0.93,1.78) 0.122	0.98 (0.70,1.37) 0.896	0.459
Reported/Verified Essential Hypertension	12	0.90 (0.66,1.23)** 0.525**	1.26 (0.87,1.82)** 0.218**	1.45 (0.98,2.15)** 0.065**	0.125**
Reported/Verified Essential Hypertension ^b	12	0.78 (0.58,1.04)** 0.094**	1.27 (0.90,1.81)** 0.178**	1.70 (1.17,2.49)** 0.006**	0.002**
Reported Heart Disease (Excluding Essential Hypertension)	12	1.30 (0.99,1.71) 0.055	0.98 (0.70,1.38) 0.916	0.69 (0.47,1.02) 0.062	0.024
Verified Heart Disease (Excluding Essential Hypertension)	12	1.29 (0.99,1.70) 0.062	0.99 (0.70,1.39) 0.945	0.67 (0.45,1.00) 0.049	0.021
Reported/Verified Myocardial Infarction	12	**** ****	**** ****	**** ****	****
Systolic Blood Pressure	12	**** ****	**** ****	**** ****	****
Heart Sounds	12	0.69 (0.33,1.44) 0.325	0.53 (0.18,1.52) 0.237	1.19 (0.48,3.00) 0.707	0.438
Overall ECG	12	0.72 (0.50,1.05) 0.090	1.01 (0.65,1.57) 0.948	1.01 (0.61,1.67) 0.978	0.342

TABLE Q-15. (Continued)

Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
ECG: RBBB	12	0.79 (0.14,4.38) 0.791	1.97 (0.37,10.60) 0.429	-- --	0.649
ECG: LBBB	12	-- --	-- --	-- --	--
ECG: Nonspecific T-Waves	12	0.75 (0.46,1.22) 0.246	1.20 (0.71,2.01) 0.492	1.35 (0.76,2.39) 0.299	0.297
ECG: Bradycardia	12	1.01 (0.56,1.81)** 0.986**	0.57 (0.24,1.39)** 0.217**	0.45 (0.16,1.30)** 0.141**	0.256**
ECG: Bradycardia ^c	12	1.08 (0.61,1.94)** 0.785**	0.56 (0.23,1.36)** 0.203**	0.41 (0.14,1.17)** 0.095**	0.142**
ECG: Arrhythmia	12	1.33 (0.68,2.58) 0.404	0.83 (0.31,2.23) 0.712	2.34 (1.00,5.51) 0.051	0.238
ECG: Other Diagnoses	12	0.95 (0.67,1.35) 0.776	1.07 (0.70,1.64) 0.751	0.53 (0.29,0.96) 0.036	0.140
Diastolic Blood Pressure	12	0.78 (0.37,1.62) 0.501	1.61 (0.80,3.22) 0.180	1.17 (0.52,2.63) 0.701	0.413
Funduscopic Examination	12	1.70 (0.37,7.85)** 0.496**	0.94 (0.10,8.57)** 0.953**	1.72 (0.18,16.74)** 0.639**	0.892**
Carotid Bruits	12	2.75 (0.73,10.36) 0.134	2.12 (0.38,11.74) 0.389	-- --	0.234

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Radial Pulses	12	-- --	-- --	-- --	--
Femoral Pulses	12	2.43 (0.69,8.57)** 0.169**	3.48 (0.91,13.38)** 0.070**	4.52 (1.00,20.31)** 0.049**	0.141**
Popliteal Pulses	12	0.98 (0.37,2.62) 0.973	2.07 (0.80,5.35) 0.133	1.49 (0.41,5.45) 0.548	0.490
Dorsalis Pedis Pulses	12	1.17 (0.74,1.86) 0.500	1.62 (0.97,2.70) 0.066	1.72 (0.98,3.04) 0.061	0.146
Dorsalis Pedis Pulses ^d	12	1.17 (0.74,1.86) 0.498	1.65 (0.99,2.75) 0.056	1.86 (1.07,3.26) 0.029	0.087
Posterior Tibial Pulses	12	0.38 (0.11,1.34) 0.131	4.46 (2.02,9.82) <0.001	1.12 (0.25,5.14) 0.880	<0.001
Leg Pulses	12	1.06 (0.69,1.62) 0.798	1.92 (1.22,3.03) 0.005	1.71 (1.01,2.91) 0.047	0.020
Peripheral Pulses	12	1.01 (0.66,1.55) 0.963	1.87 (1.18,2.94) 0.007	1.76 (1.05,2.97) 0.033	0.017
All Pulses	12	1.03 (0.67,1.56) 0.904	1.84 (1.17,2.90) 0.008	1.75 (1.04,2.95) 0.035	0.021
Red Blood Cell Count	13	0.99 (0.49,1.99) 0.977	0.57 (0.20,1.66) 0.303	1.26 (0.50,3.16) 0.617	0.641

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TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Hematocrit	13	0.75 (0.27,2.06) 0.571	1.27 (0.46,3.53) 0.649	0.62 (0.14,2.76) 0.531	0.774
Mean Corpuscular Volume	13	0.77 (0.49,1.22) 0.267	1.77 (1.11,2.82) 0.017	1.12 (0.63,1.97) 0.702	0.034
Mean Corpuscular Hemoglobin	13	0.97 (0.59,1.62) 0.918	1.38 (0.78,2.45) 0.267	1.28 (0.68,2.40) 0.451	0.628
Platelet Count	13	2.04 (0.78,5.34) 0.145	2.26 (0.75,6.83) 0.147	2.85 (1.00,8.11) 0.050	0.181
Prothrombin Time	13	**** ****	**** ****	**** ****	****
Kidney Disease	14	1.10 (0.72,1.70) 0.660	0.91 (0.52,1.61) 0.748	1.23 (0.72,2.12) 0.450	0.820
Urinary Protein	14	0.87 (0.46,1.63) 0.654	0.80 (0.37,1.76) 0.585	0.88 (0.39,1.96) 0.748	0.930
Urinary Occult Blood	14	0.92 (0.56,1.50)** 0.738**	1.43 (0.84,2.41)** 0.184**	1.14 (0.64,2.03)** 0.659**	0.521**
Urinary White Blood Cell Count	14	0.83 (0.48,1.44) 0.506	1.04 (0.56,1.97) 0.893	1.30 (0.71,2.38) 0.387	0.668
Current Thyroid Function	15	1.15 (0.61,2.16) 0.670	0.93 (0.40,2.16) 0.872	0.85 (0.35,2.09) 0.724	0.931

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TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
History of Thyroid Disease	15	1.11 (0.63,1.95) 0.725	0.61 (0.26,1.47) 0.271	0.81 (0.35,1.87) 0.627	0.583
Thyroid Gland	15	0.93 (0.70,1.24) 0.620	1.12 (0.80,1.58) 0.506	0.81 (0.56,1.18) 0.276	0.530
Testes	15	0.75 (0.33,1.69) 0.486	0.76 (0.25,2.29) 0.627	3.80 (1.67,8.63) 0.001	0.010
T ₃ % Uptake	15	1.14 (0.60,2.14)** 0.693**	0.93 (0.40,2.15)** 0.863**	0.45 (0.13,1.49)** 0.188**	0.451**
TSH	15	1.45 (0.62,3.40) 0.387	0.86 (0.24,3.02) 0.810	2.15 (0.80,5.79) 0.130	0.430
Testosterone	15	0.72 (0.20,2.58)** 0.610**	0.89 (0.24,3.21)** 0.854**	1.30 (0.39,4.31)** 0.667**	0.899**
Fasting Glucose	15	0.66 (0.42,1.05) 0.081	1.18 (0.72,1.94) 0.510	2.95 (1.87,4.66) <0.001	<0.001
Composite Diabetes Indicator	15	0.82 (0.48,1.43)** 0.491**	1.01 (0.56,1.82)** 0.986**	2.51 (1.51,4.16)** <0.001**	0.003**
Composite Skin Test Diagnosis	16	1.52 (0.83,2.78) 0.176	1.81 (0.89,3.67) 0.099	1.33 (0.56,3.15) 0.519	0.332
Asthma	17	2.42 (1.07,5.47) 0.033	1.33 (0.43,4.18) 0.621	1.57 (0.54,4.58) 0.406	0.213

TABLE Q-15. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
Bronchitis	17	1.25 (0.87,1.80)** 0.227**	1.02 (0.64,1.63)** 0.927**	0.87 (0.52,1.44)** 0.579**	0.533**
Pleurisy	17	0.80 (0.39,1.61) 0.527	0.39 (0.12,1.30) 0.126	1.47 (0.67,3.20) 0.332	0.183
Pneumonia	17	0.86 (0.54,1.38) 0.542	0.81 (0.44,1.47) 0.486	0.78 (0.42,1.45) 0.433	0.782
Tuberculosis	17	1.09 (0.54,2.20) 0.801	0.64 (0.22,1.85) 0.408	0.50 (0.15,1.67) 0.260	0.486
Thorax and Lung Abnormalities	17	0.92 (0.52,1.62) 0.771	1.60 (0.87,2.94) 0.130	1.98 (1.04,3.78) 0.037	0.096
Hyperresonance	17	0.92 (0.44,1.95) 0.834	0.98 (0.39,2.48) 0.971	2.11 (0.90,4.97) 0.086	0.378
Dullness	17	-- --	-- --	-- --	--

^aAnalysis performed for model including occupation.

^bAnalysis performed for model excluding percent body fat and cholesterol.

^cAnalysis performed for model excluding percent body fat.

^dAnalysis performed for model excluding cholesterol.

**Categorized current dioxin-by-covariate interaction ($0.01 < p \leq 0.05$); adjusted relative risk, confidence interval, and p-value derived from a model fitted after deletion of this interaction.

****Categorized current dioxin-by-covariate interaction ($p \leq 0.01$); adjusted relative risk, confidence interval, and p-value not presented.

Note: Background (Comparisons): Current Dioxin ≤ 10 ppt.

Unknown (Ranch Hands): Current Dioxin ≤ 10 ppt.

Low (Ranch Hands): 15 ppt $<$ Current Dioxin ≤ 33.3 ppt.

High (Ranch Hands): Current Dioxin > 33.3 ppt.

TABLE Q-16.
Summary of Adjusted Results for Polychotomous Variables
Model 1: Ranch Hands - Initial Dioxin (Categorized)

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption		
		Initial Dioxin Contrast	Adj. Relative Risk (95% C.I.)	p-Value	Initial Dioxin Contrast	Adj. Relative Risk (95% C.I.)	p-Value
White Blood Cell Count	13	Overall†		0.467	Overall†		0.295
		M vs. L ^a	0.76 (0.28,2.04)	0.588	M vs. L ^a	0.64 (0.29,1.40)	0.264
		H vs. L ^a	0.97 (0.33,2.89)	0.957	H vs. L ^a	0.97 (0.40,2.33)	0.941
		M vs. L ^b	0.70 (0.26,1.94)	0.497	M vs. L ^b	0.87 (0.40,1.88)	0.725
Hemoglobin	13	H vs. L ^b	0.29 (0.06,1.28)	0.101	H vs. L ^b	0.31 (0.08,1.26)	0.101
		Overall†		0.694	Overall†		0.896
		M vs. L ^a	1.02 (0.35,3.02)	0.968	M vs. L ^a	0.99 (0.44,2.22)	0.983
		H vs. L ^a	0.80 (0.22,2.98)	0.743	H vs. L ^a	0.93 (0.32,2.74)	0.900
		M vs. L ^b	--	--	M vs. L ^b	2.09 (0.46,9.47)	0.341
FSH	15	H vs. L ^b	--	--	H vs. L ^b	2.04 (0.29,14.15)	0.472
		Overall†		0.481	Overall†		0.982
		M vs. L ^a	--	--	M vs. L ^a	0.98 (0.30,3.22)	0.978
		H vs. L ^a	--	--	H vs. L ^a	0.91 (0.23,3.67)	0.898
		M vs. L ^b	0.83 (0.45,1.53)	0.550	M vs. L ^b	0.95 (0.58,1.54)	0.824
2-Hour Postprandial Glucose	15	H vs. L ^b	0.69 (0.32,1.49)	0.348	H vs. L ^b	0.81 (0.41,1.59)	0.536
		Overall†		0.229	Overall†		0.237
		M vs. L ^c	1.17 (0.65,2.10)	0.609	M vs. L ^c	1.39 (0.87,2.19)	0.164
		H vs. L ^c	0.93 (0.45,1.93)	0.319	H vs. L ^c	1.15 (0.61,2.15)	0.671
		M vs. L ^d	2.57 (0.40,16.44)	0.845	M vs. L ^d	1.28 (0.43,3.81)	0.657
2-Hour Postprandial Glucose ^e	15	H vs. L ^d	5.95 (0.91,38.81)	0.062	H vs. L ^d	2.98 (0.97,9.14)	0.057
		Overall†		0.147	Overall†		0.091
		M vs. L ^c	1.19 (0.67,2.14)	0.554	M vs. L ^c	1.45 (0.92,2.29)	0.107
		H vs. L ^c	1.05 (0.51,2.16)	0.894	H vs. L ^c	1.31 (0.70,2.43)	0.396
		M vs. L ^d	2.97 (0.41,21.43)	0.279	M vs. L ^d	1.40 (0.47,4.20)	0.543
Loss of Vital Capacity	17	H vs. L ^d	7.99 (1.10,57.96)	0.040	H vs. L ^d	3.85 (1.28,11.57)	0.016
		Overall†		0.052	Overall†		0.011
		M vs. L ^f	1.66 (0.76,3.62)	0.201	M vs. L ^f	1.83 (1.02,3.28)	0.043
		H vs. L ^f	2.28 (0.95,5.50)	0.067	H vs. L ^f	2.60 (1.29,5.25)	0.008
		M vs. L ^g	0.18 (0.03,1.20)	0.076	M vs. L ^g	0.33 (0.07,1.50)	0.150
		H vs. L ^g	1.34 (0.31,5.87)	0.699	H vs. L ^g	2.03 (0.59,7.00)	0.264

TABLE Q-16. (Continued)
Summary of Adjusted Results for Polychotomous Variables
Model 1: Ranch Hands - Initial Dioxin (Categorized)

Clinical Parameter	Reference Chapter	Minimal Assumption			Maximal Assumption		
		Initial Dioxin Contrast	Adj. Relative Risk (95% C.I.)	p-Value	Initial Dioxin Contrast	Adj. Relative Risk (95% C.I.)	p-Value
Obstructive Abnormality	17	Overall [†]		0.158	Overall [†]		0.212
		M vs. L ^f	0.94 (0.57,1.56)	0.804	M vs. L ^f	0.87 (0.59,1.30)	0.503
		H vs. L ^f	0.57 (0.30,1.10)	0.092	H vs. L ^f	0.54 (0.31,0.96)	0.035
		M vs. L ^g	2.38 (0.70,8.10)	0.167	M vs. L ^g	1.32 (0.62,2.83)	0.473
		H vs. L ^g	0.94 (0.17,5.17)	0.944	H vs. L ^g	0.68 (0.19,2.41)	0.549

^aAbnormal low contrasted with normal.

^bAbnormal high contrasted with normal.

^cImpaired contrasted with normal.

^dDiabetic contrasted with normal.

^eAnalysis performed for model excluding percent body fat.

^fMild contrasted with none.

^gModerate/severe contrasted with none.

[†]Overall test of independence of initial dioxin and clinical parameter.

--: Relative risk, confidence interval, and p-value not given due to the sparse number of abnormalities.

Note: Minimal--Low: 52-93 ppt; Medium: >93-292 ppt; High: >292 ppt.

Maximal--Low: 25-93 ppt; Medium: >93-292 ppt; High: >292 ppt.

M vs. L: Medium initial dioxin category versus low initial dioxin category.

H vs. L: High initial dioxin category versus low initial dioxin category.

TABLE Q-17.
Summary of Adjusted Results for Polychotomous Variables
Model 2: Ranch Hands - Current Dioxin (Categorized) and Time

Clinical Parameter	Reference Chapter	Time (Yrs.)	Minimal Assumption			Time (Yrs.)	Maximal Assumption		
			Current Dioxin Contrast	Adj. Relative Risk (95% C.I.)	p-Value		Current Dioxin Contrast	Adj. Relative Risk (95% C.I.)	p-Value
White Blood Cell Count	13	≤ 18.6	C-by-T*		0.184	≤ 18.6	C-by-T*		0.529
			Overall†		0.538		Overall†		0.676
			M vs. L ^a	1.16 (0.30,4.47)	0.830		M vs. L ^a	0.84 (0.31,2.31)	0.737
			H vs. L ^a	2.36 (0.56,9.95)	0.241		H vs. L ^a	2.09 (0.70,6.20)	0.184
			M vs. L ^b	2.04 (0.36,11.60)	0.421		M vs. L ^b	0.97 (0.34,2.77)	0.954
	13	> 18.6	H vs. L ^b	1.15 (0.13,10.48)	0.900		H vs. L ^a	0.43 (0.07,2.75)	0.375
			Overall†		0.172	> 18.6	Overall†		0.427
			M vs. L ^a	0.36 (0.09,1.43)	0.147		M vs. L ^a	0.46 (0.14,1.52)	0.201
			H vs. L ^a	0.31 (0.06,1.54)	0.151		H vs. L ^a	0.42 (0.10,1.85)	0.251
			M vs. L ^b	0.41 (0.12,1.36)	0.145		M vs. L ^b	0.92 (0.31,2.71)	0.880
Hemoglobin	13	≤ 18.6	H vs. L ^b	0.20 (0.03,1.18)	0.076	≤ 18.6	H vs. L ^b	0.34 (0.05,2.19)	0.259
			C-by-T*		0.334		C-by-T*		0.043
			Overall†		0.446		Overall†		0.116
			M vs. L ^a	--	--		M vs. L ^a	--	--
			H vs. L ^a	0.91 (0.16,5.20)	0.912		H vs. L ^a	0.72 (0.16,3.35)	0.679
	13	> 18.6	M vs. L ^b	--	--	> 18.6	M vs. L ^b	--	--
			H vs. L ^b	--	--		H vs. L ^a	--	--
			Overall†		0.748		Overall†		0.411
			M vs. L ^a	2.21 (0.53,9.17)	0.274		M vs. L ^a	2.79 (0.90,8.69)	0.076
			H vs. L ^a	1.93 (0.41,9.14)	0.410		H vs. L ^a	2.23 (0.61,8.14)	0.226

TABLE Q-17. (Continued)

Summary of Adjusted Results for Polychotomous Variables
Model 2: Ranch Hands - Current Dioxin (Categorized) and Time

Clinical Parameter	Reference Chapter	Time (Yrs.)	Minimal Assumption			Maximal Assumption		
			Current Dioxin Contrast	Adj. Relative Risk (95% C.I.)	p-Value	Time (Yrs.)	Current Dioxin Contrast	Adj. Relative Risk (95% C.I.)
FSH	15	≤ 18.6	C-by-T*		0.710	≤ 18.6	C-by-T*	0.047
			Overall†		0.583		Overall†	0.773
			M vs. L ^a	--	--		M vs. L ^a	0.97 (0.22,4.29)
			H vs. L ^a	--	--		H vs. L ^a	1.21 (0.23,6.54)
			M vs. L ^b	0.73 (0.30,1.78)	0.487		M vs. L ^b	0.61 (0.30,1.23)
		>18.6	H vs. L ^b	0.52 (0.14,1.96)	0.332		H vs. L ^a	0.45 (0.13,1.49)
			Overall†		0.768	>18.6	Overall†	0.176
			M vs. L ^a	--	--		M vs. L ^a	0.95 (0.14,6.41)
			H vs. L ^a	--	--		H vs. L ^a	0.67 (0.07,6.62)
			M vs. L ^b	1.61 (0.65,4.02)	0.303		M vs. L ^b	2.43 (1.16,5.06)
Q-182	15	≤ 18.6	H vs. L ^b	1.37 (0.48,3.90)	0.558		H vs. L ^b	2.10 (0.87,5.09)
			C-by-T*		0.358	≤ 18.6	C-by-T*	0.813
			Overall†		0.177		Overall†	0.102
			M vs. L ^c	1.51 (0.60,3.82)	0.387		M vs. L ^c	1.19 (0.61,2.34)
			H vs. L ^c	1.22 (0.37,4.02)	0.748		H vs. L ^c	0.99 (0.36,2.70)
		>18.6	M vs. L ^d	1.14 (0.16,7.88)	0.895		M vs. L ^d	1.14 (0.23,5.62)
			H vs. L ^d	5.20 (0.82,32.91)	0.080		H vs. L ^d	5.33 (1.22,23.28)
			Overall†		0.140	>18.6	Overall†	0.518
			M vs. L ^c	0.46 (0.21,0.97)	0.040		M vs. L ^c	0.97 (0.52,1.83)
			H vs. L ^c	0.53 (0.22,1.27)	0.154		H vs. L ^c	1.17 (0.55,2.49)
			M vs. L ^d	0.53 (0.08,3.71)	0.525		M vs. L ^d	0.51 (0.11,2.29)
			H vs. L ^d	1.95 (0.32,12.02)	0.471		H vs. L ^d	1.93 (0.52,7.22)

TABLE Q-17. (Continued)

Summary of Adjusted Results for Polychotomous Variables
Model 2: Ranch Hands - Current Dioxin (Categorized) and Time

Clinical Parameter	Reference Chapter	Time (Yrs.)	Minimal Assumption			Maximal Assumption		
			Current Dioxin Contrast	Adj. Relative Risk (95% C.I.)	p-Value	Time (Yrs.)	Current Dioxin Contrast	Adj. Relative Risk (95% C.I.)
Loss of Vital Capacity	17	≤ 18.6	C-by-T*		0.356	≤ 18.6	C-by-T*	0.430
			Overall†		0.327		Overall†	0.019
			M vs. L ^e	1.43 (0.44,4.69)	0.555		M vs. L ^e	1.48 (0.61,3.62)
			H vs. L ^e	3.83 (1.05,13.94)	0.042		H vs. L ^e	4.44 (1.63,12.12)
			M vs. L ^f	0.46 (0.05,3.94)	0.481		M vs. L ^f	0.69 (0.14,3.52)
	>18.6	> 18.6	M vs. L ^f	3.77 (0.52,27.25)	0.189		H vs. L ^f	4.52 (0.98,20.78)
			Overall†		0.836		Overall†	0.915
			M vs. L ^e	0.70 (0.29,1.71)	0.438		M vs. L ^e	1.10 (0.52,2.31)
			H vs. L ^e	0.80 (0.29,2.22)	0.664		H vs. L ^e	1.32 (0.55,3.19)
			M vs. L ^f	0.39 (0.04,4.35)	0.444		M vs. L ^f	0.63 (0.11,3.80)
Obstructive Abnormality	17	≤ 18.6	M vs. L ^f	1.00 (0.09,11.03)	0.999	≤ 18.6	C-by-T*	0.963
			C-by-T*		0.803		Overall†	0.683
			Overall†		0.417		Overall†	
			M vs. L ^e	0.82 (0.40,1.65)	0.571		M vs. L ^e	0.75 (0.43,1.32)
			H vs. L ^e	0.65 (0.25,1.69)	0.375		H vs. L ^e	0.65 (0.29,1.49)
	>18.6	> 18.6	M vs. L ^f	3.23 (0.49,21.25)	0.222		M vs. L ^f	1.37 (0.47,3.97)
			H vs. L ^f	2.38 (0.21,27.21)	0.486		H vs. L ^f	1.31 (0.27,6.48)
			Overall†		0.103		Overall†	0.513
			M vs. L ^e	0.75 (0.37,1.51)	0.414		M vs. L ^e	0.79 (0.45,1.37)
			H vs. L ^e	0.50 (0.21,1.19)	0.117		H vs. L ^e	0.57 (0.28,1.17)

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TABLE Q-17. (Continued)
Summary of Adjusted Results for Polychotomous Variables
Model 2: Ranch Hands - Current Dioxin (Categorized) and Time

^aAbnormal low contrasted with normal.

^bAbnormal high contrasted with normal.

^cImpaired contrasted with normal.

^dDiabetic contrasted with normal.

^eMild contrasted with none.

^fModerate/severe contrasted with none.

*Test of significance of current dioxin-by-time interaction.

†Overall test of independence of current dioxin and the clinical parameter within time stratum.

--: Adjusted relative risk, confidence interval, and p-value not given due to the sparse number of abnormalities.

Note: Minimal--Low: >10-14.65 ppt; Medium: >14.65-45.75 ppt; High: >45.75 ppt.

Maximal--Low: >5-14.65 ppt; Medium: >14.65-45.75 ppt; High: >45.75 ppt.

M vs. L: Medium current dioxin category versus low current dioxin category.

H vs. L: High current dioxin category versus low current dioxin category.

TABLE Q-18.
Summary of Adjusted Results for Polychotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
White Blood Cell Count	13	0.93 (0.56,1.54) ^a 0.780 ^a	0.58 (0.27,1.22) ^a 0.151 ^a	0.63 (0.31,1.30) ^a 0.214 ^a	0.215
		0.85 (0.48,1.50) ^b 0.577 ^b	0.62 (0.29,1.30) ^b 0.206 ^b	0.44 (0.19,1.05) ^b 0.063 ^b	
Hemoglobin	13	0.88 (0.45,1.72) ^a 0.716 ^a	1.11 (0.52,2.35) ^a 0.785 ^a	0.67 (0.27,1.70) ^a 0.402 ^a	0.703
		0.54 (0.13,2.24) ^b 0.393 ^b	1.81 (0.57,5.74) ^b 0.315 ^b	0.57 (0.10,3.42) ^b 0.539 ^b	
FSH	15	1.20 (0.49,2.96) ^a 0.691 ^a	1.14 (0.38,3.40) ^a 0.821 ^a	0.93 (0.31,2.79) ^a 0.895 ^a	0.826
		1.14 (0.77,1.71) ^b 0.508 ^b	1.38 (0.85,2.22) ^b 0.190 ^b	1.41 (0.82,2.40) ^b 0.212 ^b	
2-Hour Postprandial Glucose	15	1.03 (0.71,1.51) ^c 0.872 ^c	1.10 (0.70,1.73) ^c 0.685 ^c	1.41 (0.87,2.27) ^c 0.160 ^c	0.267
		0.88 (0.37,2.06) ^d 0.760 ^d	0.60 (0.19,1.89) ^d 0.386 ^d	2.35 (1.06,5.19) ^d 0.035 ^d	

TABLE Q-18. (Continued)

Summary of Adjusted Results for Polychotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Clinical Parameter	Reference Chapter	Adj. Relative Risk (95% C.I.)/p-Value			Overall p-Value
		Unknown vs. Background	Low vs. Background	High vs. Background	
2-Hour Postprandial Glucose ^e	15	0.96 (0.66,1.40) ^c 0.835 ^c	1.09 (0.69,1.72) ^c 0.702 ^c	1.45 (0.90,2.35) ^c 0.126 ^c	0.092
		0.66 (0.27,1.59) ^d 0.357 ^d	0.51 (0.15,1.81) ^d 0.299 ^d	2.60 (1.17,5.81) ^d 0.019 ^d	
Loss of Vital Capacity	17	0.67 (0.39,1.14) ^f 0.142 ^f	1.17 (0.68,2.02) ^f 0.576 ^f	1.76 (1.04,3.00) ^f 0.036 ^f	0.052
		2.23 (0.88,5.62) ^g 0.090 ^g	1.19 (0.33,4.34) ^g 0.792 ^g	2.42 (0.74,7.92) ^g 0.143 ^g	
Obstructive Abnormality	17	1.45 (1.06,1.99) ^f 0.020 ^f	1.18 (0.79,1.75) ^f 0.412 ^f	0.75 (0.48,1.19) ^f 0.223 ^f	0.083
		1.16 (0.63,2.12) ^g 0.636 ^g	1.45 (0.73,2.88) ^g 0.293 ^g	0.55 (0.19,1.51) ^g 0.263 ^g	

^aAbnormal low contrasted with normal.^bAbnormal high contrasted with normal.^cImpaired contrasted with normal.^dDiabetic contrasted with normal.^eAnalysis performed for model excluding percent body fat.^fMild contrasted with none.^gModerate/severe contrasted with none.

TABLE Q-18. (Continued)

Summary of Adjusted Results for Polychotomous Variables
Model 3: Ranch Hands and Comparisons by Current Dioxin Category

Note: Risk is relative to background current dioxin category.
Background (Comparisons): Current Dioxin \leq 10 ppt.
Unknown (Ranch Hands): Current Dioxin \leq 10 ppt.
Low (Ranch Hands): 15 ppt < Current Dioxin \leq 33.3 ppt.
High (Ranch Hands): Current Dioxin $>$ 33.3 ppt.